Butterfield Station
Table of Contents
August 19, 2003

Permit Conditions
Butterfield Station
V98-003
Includes Minor Modification 1-17-03-01
August 19, 2003

In accordance with Maricopa County Air Pollution Control Rules and Regulations (Rules), Rule 210 § 302.2, all Conditions of this Permit are federally enforceable unless they are identified as being locally enforceable only. However, any Permit Condition identified as locally enforceable only will become federally enforceable if, during the term of this Permit, the underlying requirement becomes a requirement of the Clean Air Act (CAA) or any of the CAA's applicable requirements.

All federally enforceable terms and conditions of this Permit are enforceable by the Administrator of the United States Environmental Protection Agency (Administrator or Administrator of the USEPA hereafter) and citizens under Section 304 of the CAA.

Any cited regulatory paragraphs or section numbers refer to the version of the regulation that was in effect on the first date of public notice of the applicable Permit Condition unless specified otherwise.

GENERAL CONDITIONS:

1. AIR POLLUTION PROHIBITED: [County Rule 100 §301] [SIP Rule 3]

The Permittee shall not discharge from any source whatever into the atmosphere regulated air pollutants which exceed in quantity or concentration that specified and allowed in the County or State Implementation Plan (SIP) Rules, the Arizona Administrative Code (AAC) or the Arizona Revised Statutes (ARS), or which cause damage to property or unreasonably interfere with the comfortable enjoyment of life or property of a substantial part of a community, or obscure visibility, or which in any way degrade the quality of the ambient air below the standards established by the Maricopa County Board of Supervisors or the Director of the Arizona Department of Environmental Quality (ADEQ).

2. CIRCUMVENTION: [County Rule 100 §104] [40 CFR 60.12] [40 CFR 63.4(b)]

The Permittee shall not build, erect, install, or use any article, machine, equipment, condition, or any contrivance, the use of which, without resulting in a reduction in the total release of regulated air pollutants to the atmosphere, conceals or dilutes an emission which would otherwise constitute a violation of this Permit or any Rule or any emission limitation or standard. The Permittee shall not circumvent the requirements concerning dilution of regulated air pollutants by using more emission openings than is considered normal practice by the industry or activity in question.

3. CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS:

[County Rule 100 §401] [County Rule 210 §§301.7, 302.1e(1), 305.1c(1) & 305.1e]

Any application form, report, or compliance certification submitted under the County Rules or these Permit Conditions shall contain certification by a responsible official of truth, accuracy, and completeness of the application form or report as of the time of submittal. This certification and any other certification required under the County Rules or these Permit Conditions shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

4. COMPLIANCE:

A. COMPLIANCE REQUIRED:

1) The Permittee must comply with all conditions of this permit and with all applicable requirements of Arizona air quality statutes and the air quality rules. Compliance with permit terms and conditions does not relieve, modify, or otherwise affect the Permittee's duty to comply with all applicable requirements of Arizona air quality statutes and the Maricopa County Air Pollution Control Regulations. Any permit non-compliance is grounds for enforcement action; for a permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. Noncompliance with any

federally enforceable requirement in this Permit constitutes a violation of the Act. [This Condition is federally enforceable if the condition or requirement itself is federally enforceable and only locally enforceable if the condition or requirement itself is locally enforceable only]

[County Rule 210 §§301.8b(4) & 302.1h(1)]

2) The Permittee shall halt or reduce the permitted activity in order to maintain compliance with applicable requirements of Federal laws, Arizona laws, the County Rules, or other conditions of this Permit.

[County Rule 210 §302.1h(2)]

3) For any major source operating in a nonattainment area for any pollutant(s) for which the source is classified as a major source, the source shall comply with reasonably available control technology (RACT) as defined in County Rule 100.

[County Rule 210 §302.1(h)(6)] [SIP Rule 220 §302.1]

Compliance with the RACT requirements of this Permit Condition for nitrogen oxides (NO_x) shall not be required if a waiver granted by the Administrator under Section 182 (f) of the Clean Air Act is in effect.

4) For any major source operating in a nonattainment area designated as serious for PM_{10}, for which the source is classified as a major source for PM_{10}, the source shall comply with the best available control technology (BACT), as defined in County Rule 100.

[County Rule 210 §302.1(h)(7)]

B. COMPLIANCE CERTIFICATION REQUIREMENTS:

[County Rule 210 §305.1d]

The Permittee shall file an annual compliance certification with the Control Officer and also with the Administrator of the USEPA. The report shall certify compliance with the terms and conditions contained in this Permit, including emission limitations, standards, or work practices. The certification shall be on a form supplied or approved by the Control Officer and shall include each of the following:

1) The identification of each term or condition of the permit that is the basis of the certification;
2) The compliance status;
3) Whether compliance was continuous or intermittent;
4) The method(s) used for determining the compliance status of the source, currently and over the reporting period; and
5) Other facts as the Control Officer may require to determine the compliance status of the source.

The annual certification shall be filed at the same time as the second semiannual monitoring report required by the Specific Condition section of these Permit Conditions and every 12 months thereafter.

C. COMPLIANCE PLAN: [County Rule 210 §305.1g]

Based on the certified information contained in the application for this Permit, the facility is in compliance with all applicable requirements in effect as of the release date of the proposed conditions for this Permit. The Permittee shall continue to comply with all applicable requirements and shall meet any applicable requirements that may become effective during the term of this permit on a timely basis. [This Condition is federally enforceable if the applicable requirement itself is federally enforceable and only locally enforceable if the applicable requirement itself is locally enforceable only]

5. CONFIDENTIALITY CLAIMS: [County Rule 100 §402] [County Rule200 §411]

Any records, reports or information obtained from the Permittee under the County Rules or this Permit shall be available to the public, unless the Permittee files a claim of confidentiality in accordance with ARS §49-487(c) which:

A. precisely identifies the information in the permit(s), records, or reports which is considered confidential, and

B. provides sufficient supporting information to allow the Control Officer to evaluate whether such information satisfies the requirements related to trade secrets or, if applicable, how the information, if disclosed, could cause substantial harm to the person's competitive position.

The claim of confidentiality is subject to the determination by the Control Officer as to whether the claim satisfies the claim for trade secrets.

A claim of confidentiality shall not excuse the Permittee from providing any and all information required or requested by the Control Officer and shall not be a defense for failure to provide such information.

If the Permittee submits information with an application under a claim of confidentiality under ARS 49-487 and County Rule 200, the Permittee shall submit a copy of such information directly to the Administrator of the USEPA.

[County Rule 210 §301.5]

6. CONTINGENT REQUIREMENTS:

NOTE: This Permit Condition covers activities and processes addressed by the CAA which may or may not be present at the facility. This condition is intended to meet the requirements of both Section 504(a) of the 1990 Amendments to the CAA, which requires that Title V permits contain conditions necessary to assure compliance with applicable requirements of the Act as well as the Acid Rain provisions required to be in all Title V permits.

A. ACID RAIN: [County Rule 210 §§302.1b(2) & 302.1f] [County Rule 371 §301]

1). Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the CAA and incorporated under County Rule 371, both provisions shall be incorporated into this Permit and shall be enforceable by the Administrator.

2) The Permittee shall not allow emissions exceeding any allowances that the source lawfully holds under Title IV of the CAA or the regulations promulgated thereunder and incorporated under County Rule 371.

a) No permit revision shall be required for increases in emissions that are authorized by allowances acquired under the acid rain program and incorporated under County Rule 371, provided that such increases do not require a permit revision under any other applicable requirement.

b) No limit is placed on the number of allowances held by the Permittee. The Permittee may not, however, use allowances as a defense to non-compliance with any other applicable requirement.

c) Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the CAA.

d) All of the following prohibitions apply to any unit subject to the provisions of Title IV of the CAA and incorporated into this Permit under County Rule 371:

(1) Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners or operators of the unit or the designated representative of the owners or operators.

(2) Exceedances of applicable emission rates.

(3) The use of any allowance prior to the year for which it was allocated.

(4) Violation of any other provision of the permit.

B. ASBESTOS:

[40 CFR 61, Subpart M] [County Rule 370 §301.8 - locally enforceable only]

The Permittee shall comply with the applicable requirements of Sections 61.145 through 61.147 and 61.150 of the National Emission Standard for Asbestos and County Rule 370 for all demolition and renovation projects.

C. RISK MANAGEMENT PLAN (RMP): [40 CFR 68]

Should this stationary source, as defined in 40 CFR 68.3, be subject to the accidental release prevention regulations in 40 CFR Part 68, then the Permittee shall submit an RMP by the date specified in 40 CFR Section 68.10 and shall certify compliance with the requirements of 40 CFR Part 68 as part of the annual compliance certification as required by 40 CFR Part 70. However, neither the RMP nor modifications to the RMP shall be considered to be a part of this Permit.

D. STRATOSPHERIC OZONE PROTECTION: [40 CFR 82 Subparts E, F, and G]

If applicable, the Permittee shall follow the requirements of 40 CFR 82.106 through 82.124 with respect to the labeling of products using ozone depleting substances.

If applicable, the Permittee shall comply with all of the following requirements with respect to recycling and emissions reductions:

1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices under 40 CFR 82.156.
2) Equipment used during maintenance, service, repair, or disposal of appliances must meet the standards for recycling and recovery equipment in accordance with 40 CFR 82.158.
3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by a certified technician under 40 CFR 82.161.

If applicable, the Permittee shall follow the requirements of 40CFR 82 Subpart G, including all Appendices, with respect to the safe alternatives policy on the acceptability of substitutes for ozone-depleting compounds.

7. DUTY TO SUPPLEMENT OR CORRECT APPLICATION:

[County Rule 210 §301.6]

If the Permittee fails to submit any relevant facts or has submitted incorrect information in a permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, the Permittee shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a proposed permit.

8. EMERGENCY EPISODES: [County Rule 600 §302] [SIP Rule 72.A.5. e, f & g]

If an air pollution alert, warning, or emergency has been declared, the Permittee shall comply with any applicable requirements of County Rule 600 §302.

9. EMERGENCY PROVISIONS: [County Rule 130 §§201 & 402]

An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that cause the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

An emergency constitutes an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the requirements of this Permit Condition are met.

The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

A. An emergency occurred and that the Permittee can identify the cause or causes of the emergency;
B. At the time of the emergency, the permitted source was being properly operated;
C. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in this permit; and
D. The Permittee as soon as possible telephoned the Control Officer, giving notice of the emergency, and submitted notice of the emergency to the Control Officer by certified mail, facsimile, or hand delivery within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirement of County Rule 210 §302.1.e(2) with respect to deviation reporting. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

This provision is in addition to any emergency or upset provision contained in any applicable requirement.

10. EXCESS EMISSIONS: [County Rule 140 §§103, 401 & 402]

NOTE: There are reporting requirements associated with excess emissions. These requirements are contained in the Reporting section of the General Permit Conditions in a subparagraph called Excess Emissions. The definition of excess emissions can be found in County Rule 100 §200.

A. Exemptions: The excess emissions provisions of this Permit Condition do not apply to the following standards and limitations:

1) Promulgated pursuant to Section 111 (Standards Of Performance for New Stationary Sources) of the Clean Air Act (Act) or Section 112 (National Emission Standards For Hazardous Air Pollutants) of the Act;
2) Promulgated pursuant to Title IV (Acid Deposition Control) of the Act or the regulations promulgated thereunder and incorporated under Rule 371 (Acid Rain) of these rules or Title VI (Stratospheric Ozone Protection) of the Act;
3) Contained in any Prevention Of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the Environmental Protection Agency (EPA);
4) Included in a permit to meet the requirements of Rule 240 (Permit Requirements For New Major Sources And Major Modifications To Existing Major Sources), Subsection 308.1(e) (Permit Requirements For Sources Located In Attainment And Unclassified Areas) of these rules.

B. Affirmative Defense For Malfunctions: Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. The owner and/or operator of a source with emissions in excess of an applicable emission limitation due to malfunction has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the owner and/or operator of the source has complied with the excess emissions reporting requirements of these Permit Conditions and has demonstrated all of the following:

1) The excess emissions resulted from a sudden and unavoidable breakdown of the process equipment or the air pollution control equipment beyond the reasonable control of the operator;

2) The source's air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
3) If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, then the owner and/or operator satisfactorily demonstrated that such measures were impractical;
4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
6) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
7) During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in County Rule 510 that could be attributed to the emitting source;
8) The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;
9) All emissions monitoring systems were kept in operation, if at all practicable; and
10) The owner's and/or operator's actions in response to the excess emissions were documented by contemporaneous records.

C. Affirmative Defense For Startup And Shutdown:
1) Except as provided in paragraph 2) below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. The owner and/or operator of a source with emissions in excess of an applicable emission limitation due to startup and shutdown has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the owner and/or operator of the source has complied with the excess emissions reporting requirements of these Permit Conditions and has demonstrated all of the following:
a. The excess emissions could not have been prevented through careful and prudent planning and design;
b. If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;
c. The source's air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable, during periods of such emissions;
e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
f. During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in County Rule 510 (Air Quality Standards) that could be attributed to the emitting source;

g. All emissions monitoring systems were kept in operation, if at all practicable; and

h. The owner's and/or operator's actions in response to the excess emissions were documented by contemporaneous records.

2) If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to paragraph A. of this Permit Condition.

D. Affirmative Defense For Malfunctions During Scheduled Maintenance: If excess emissions occur due to malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to paragraph A. of this Permit Condition.

E. Demonstration Of Reasonable And Practicable Measures: For an affirmative defense under paragraphs A and B of this Permit Condition, the owner and/or operator of the source shall demonstrate, through submission of the data and information required by this Permit Condition and the excess emissions reporting requirements of these Permit Conditions, that all reasonable and practicable measures within the owner's and/or operator's control were implemented to prevent the occurrence of the excess emissions.

11. FEES: [County Rule 200 §409] [County Rule 210 §§302.1i & 401]
The Permittee shall pay fees to the Control Officer under ARS 49-480(D) and County Rule 280.

12. MODELING: [County Rule 200 §407] [locally enforceable only]
Where the Control Officer requires the Permittee to perform air quality impact modeling, the Permittee shall perform the modeling in a manner consistent with the "Guideline on Air Quality Models (Revised)" (EPA-450/2-78-027R, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, July 1986) and "Supplement B to the Guideline on Air Quality Models" (U.S. Environmental Protection Agency, September 1990). Both documents shall be referred to hereinafter as "Guideline", and are adopted by reference. Where the person can demonstrate that an air quality impact model specified in the guideline is inappropriate, the model may be modified or another model substituted if found to be acceptable to the Control Officer.

13. MONITORING / TESTING:

A. The Permittee shall monitor, sample, or perform other studies to quantify emissions of regulated air pollutants or levels of air pollution that may reasonably be attributable to the facility if required to do so by the Control Officer, either by Permit or by order in accordance with County Rule 200 §309.

[County Rule 200 §309] [SIP Rule 41]

B. Except as otherwise specified in these Permit Conditions or by the Control Officer, the Permittee shall conduct required testing used to determine compliance with standards or permit conditions established under the County or SIP Rules or these Permit Conditions in accordance with County Rule 270 and the applicable testing procedures contained in the applicable Rule, the Arizona Testing Manual for Air Pollutant Emissions or other approved USEPA test methods.

[County Rule 200 §408] [County Rule 210 §302.1.c] [County Rule 270 §§300 & 400] [SIP Rule 27]

C. The owner or operator of a permitted source shall provide, or cause to be provided, performance testing facilities as follows:
   1) Sampling ports adequate for test methods applicable to such source.
   2) Safe sampling platform(s).
   3) Safe access to sampling platforms(s).
   4) Utilities for sampling and testing equipment.

[County Rule 270 §405] [SIP Rule 42]

14. PERMITS:

A. BASIC: [County Rule 210 §302.1h(3)]

This Permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any Permit Condition.

B. DUST CONTROL PLAN REQUIREMENTS:

(NOTE: If the Permittee engages in or allows any routine dust generating activities at the facility, the Permittee shall apply to have the routine dust generating activity covered as part of this Permit. Nonroutine activities, such as construction, require a separate Earthmoving Permit that must be obtained from the Control Officer before the activity may begin.)

1) The Permittee must first submit a Dust Control Plan and obtain the Control Officer's approval of the Dust Control Plan before commencing any routine dust generating operation.

[County Rule 310 §303.3] [SIP Rule 310 §303.3]

2) A Dust Control Plan shall not be required to play on a ball field and/or for landscape maintenance. For the purpose of this Permit Condition, landscape maintenance does not include grading, trenching, nor any other mechanized surface disturbing activities.

[County Rule 200 §305] [County Rule 310 §303.4] [SIP Rule 310 §303.4]

3) Any Dust Control Plan shall, at a minimum, contain all the information described in Section 304 of Rule 310.

[County Rule 310 §303.1] [SIP Rule 310 §303.1]

4) Regardless of whether an approved Dust Control Plan is in place or not, the Permittee is still subject to all requirements of Rule 310 at all times.

[County Rule 310 §303] [SIP Rule 310 §303]

C. PERMITS AND PERMIT CHANGES, AMENDMENTS AND REVISIONS:

[County Rule 200 §§301 & 308] [County Rule 210 §§301.4a, b, c, & 400]

1) The Permittee shall comply with the Administrative Requirements of Section 400 of County Rule 210 for all changes, amendments and revisions at the facility for any source subject to regulation under County Rule 200, shall comply with all required time frames, and shall obtain any required preapproval from the Control Officer before making changes. All applications shall be filed in the manner and form prescribed by the Control Officer. The application shall contain all the information necessary to enable the Control Officer to make the determination to grant or to deny a permit or permit revision including information listed in County Rule 200 §308 and County Rule 210 §§301 & 302.3.

2) The Permittee shall supply a complete copy of each application for a permit, a minor permit revision, or a significant permit revision directly to the Administrator of the USEPA. The Control Officer may require the application information to be submitted in

a computer-readable format compatible with the Administrator's national database management system.

[County Rule 210 §§303.1a, 303.2, 405.4, & 406.4]

3) While processing an application, the Control Officer may require the applicant to provide additional information and may set a reasonable deadline for a response.

[County Rule 210 §301.4f]

4) No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.

[County Rule 210 §302.1j]

D. POSTING:

1) The Permittee shall keep a complete permit clearly visible and accessible on the site where the equipment is installed.

[County Rule 200 §311] [SIP Rule 22F]

2) If a Dust Control Plan, as required by Rule 310, has been approved by the Control Officer, the Permittee shall post a copy of the approved Dust Control Plan in a conspicuous location at the work site, within on-site equipment, or in an on-site vehicle, or shall otherwise keep a copy of the Dust Control Plan available on site at all times.

[County Rule 310 §401] [SIP Rule 310 §401]

E. PROHIBITION ON PERMIT MODIFICATION: [County Rule 200 §310]

The Permittee shall not willfully deface, alter, forge, counterfeit, or falsify this permit.

F. RENEWAL: [County Rule 210 §§301 & 302]

1) The Permittee shall submit an application for the renewal of this Permit in a timely and complete manner. For purposes of permit renewal, a timely application is one that is submitted at least six months, but not more than 18 months, prior to the date of permit expiration. A complete application shall contain all of the information required by the County Rules including Rule 200 §308 and Rule 210 §§301 & 302.3.

[County Rule 210 §§301.2a, 301.4a, b, c, d, h & 302.3]

2) The Permittee shall file all permit applications in the manner and form prescribed by the Control Officer. To apply for a permit renewal, the Permittee shall complete the "Standard Permit Application Form" and shall supply all information, including the information required by the "Filing Instructions" as shown in Appendix B of the County Rules, which is necessary to enable the Control Officer to make the determination to grant or to deny a permit which shall contain such terms and conditions as the Control Officer deems necessary to assure a source's compliance with the requirements of the CAA, ARS and County Rules.

[County Rule 200 §§308 & 309] [County Rule 210 §301.1]

3) The Control Officer may require the Permittee to provide additional information and may set a reasonable deadline for a response.

[County Rule 210 §301.4f]

4) If the Permittee submits a timely and complete application for a permit renewal, but the Control Officer has failed to issue or deny the renewal permit before the end of the term of the previous permit, then the permit shall not expire until the renewal permit has been issued or denied. This protection shall cease to apply if, subsequent to the completeness

determination, the Permittee fails to submit, by the deadline specified by the Control Officer, any additional information identified as being needed to process the application.

[County Rule 200 §403.2] [County Rule 210 §§301.4f & 301.9]

G. REVISION / REOPENING / REVOCATION:

1) This permit shall be reopened and revised to incorporate additional applicable requirements adopted by the Administrator pursuant to the CAA that become applicable to the facility if this permit has a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this Permit is due to expire unless the original permit or any of its terms have been extended pursuant to Rule 200 §403.2.

[County Rules 200 §402.1]

Any permit revision required under this Permit Condition, 14.G.1, shall reopen the entire permit and shall comply with provisions in County Rule 200 for permit renewal *(Note: this includes a facility wide application and public comment on the entire permit)* and shall reset the five year permit term.

[County Rules 200 §402.1a(1) & 210 §302.5]

2) This permit shall be reopened and revised under any of the following circumstances:
   a) Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Title V permit.
   b) The Control Officer or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
   c) The Control Officer or the Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

Proceedings to reopen and issue a permit under this Permit Condition, 14.G.2, shall follow the same procedures as apply to initial permit issuance and shall effect only those parts of the Permit for which cause to reopen exists.

[County Rule 200 §402.1]

3) This permit shall be reopened by the Control Officer and any permit shield revised, when it is determined that standards or conditions in the permit are based on incorrect information provided by the applicant.

[County Rule 210 §407.3]

4) This Permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Permit revision, revocation and reissuance, or termination or of a notification of planned changes or anticipated noncompliance does not stay any Permit Condition.

[County Rule 210 §302.1h(3)]

H. REVISION UNDER A FEDERAL HAZARDOUS AIR POLLUTANT STANDARD:

[County Rule 210 §301.2c] [locally enforceable only]

If the Permittee becomes subject to a standard promulgated by the Administrator under Section 112(d) of the CAA, the Permittee shall, within 12 months of the date on which the standard is

promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

I. REQUIREMENTS FOR A PERMIT:

1) Air Quality Permit: Except as noted under the provisions in Sections 403 and 405 of County Rule 210, no source may operate after the time that it is required to submit a timely and complete application, except in compliance with a permit issued under County Rule 210. Permit expiration terminates the Permittee's right to operate. However, if a source submits a timely and complete application, as defined in County Rule 210 §301, for permit issuance, revision, or renewal, the source's failure to have a permit is not a violation of the County Rules until the Control Officer takes final action on the application. The Source's ability to operate without a permit as set forth in this paragraph shall be in effect from the date the application is determined to be complete until the final permit is issued. This protection shall cease to apply if, subsequent to the completeness determination, the applicant fails to submit, by the deadline specified in writing by the Control Officer, any additional information identified as being needed to process the application. If a source submits a timely and complete application for a permit renewal, but the Control Officer has failed to issue or deny the renewal permit before the end of the term of the previous permit, then the permit shall not expire until the permit renewal has been issued or denied.

[County Rule 210 §301.9]

2) Earthmoving Permit:
(NOTE: If the Permittee engages in or allows any routine dust generating activities at the facility, the Permittee shall apply to have the routine dust generating activity covered as part of this Permit. Non-routine activities, such as construction , require a separate Earthmoving Permit that must be obtained from the Control Officer before the activity may begin.)

3) Burn Permit: The Permittee shall obtain a Permit To Burn from the Control Officer before conducting any open outdoor fire except for the activities listed in County Rule 314 §§302.1 and 302.2.

[County Rule 314] [County Rule 200 §306] [SIP Rule 314]

J. RIGHTS AND PRIVILEGES: [County Rule 210 §302.1h (4)]
This Permit does not convey any property rights nor exclusive privilege of any sort.

K. SEVERABILITY: [County Rule 210 §302.1g]
The provisions of this Permit are severable, and, if any provision of this Permit is held invalid, the remainder of this Permit shall not be affected thereby.

L. SCOPE:
The issuance of any permit or permit revision shall not relieve the Permittee from compliance with any Federal laws, Arizona laws, or the County or SIP Rules, nor does any other law, regulation or permit relieve the Permittee from obtaining a permit or permit revision required under the County Rules.

[County Rule 200 §308] [SIP Rule 22H]

Nothing in this permit shall alter or affect the following:

1) The provisions of Section 303 of the Act (Emergency Orders), including the authority of the Administrator of the USEPA under that section.

2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of permit issuance.
3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act.
4) The ability of the Administrator of the USEPA or of the Control Officer to obtain information from the Permittee under Section 114 of the Act, or any provision of State law.
5) The authority of the Control Officer to require compliance with new applicable requirements adopted after the permit is issued. [locally enforceable only]

[County Rule 210 §407.2]

M. TERM OF PERMIT: [County Rule 210 §§302.1a & 402]
This Permit shall remain in effect for no more than 5 years from the date of issuance.

N. TRANSFER: [County Rule 200 §404]
Except as provided in ARS 49-429 and County Rule 200, this permit may be transferred to another person if the Permittee gives notice to the Control Officer in writing at least 30 days before the proposed transfer and complies with the permit transfer requirements of County Rule 200 and the administrative permit amendment procedures under County Rule 210.

15. RECORDKEEPING:

A. RECORDS REQUIRED:

[County Rule 100 §501] [County Rule 310 §502] [SIP Rule 40 A]
The Permittee shall maintain records of all emissions testing and monitoring, records detailing all malfunctions which may cause any applicable emission limitation to be exceeded, records detailing the implementation of approved control plans and compliance schedules, records required as a condition of any permit, records of materials used or produced, and any other records relating to the emission of air contaminants which may be requested by the Control Officer.

B. RETENTION OF RECORDS:
Unless a longer time frame is specified by these Permit Conditions, information and records required by applicable requirements and copies of summarizing reports recorded by the Permittee and submitted to the Control Officer shall be retained by the Permittee for 5 years after the date on which the information is recorded or the report is submitted

[County Rule 100 §504] [SIP Rule 40 C]
The Permittee shall retain records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

[County Rule 210 §§302.1d(2)]

C. MONITORING RECORDS: [County Rule 210 §§302.1d(1) & 305.1b(1)]
Records of any monitoring required by this Permit shall include the following:
1) The date, place as defined in the permit, and time of sampling or measurements;
2) The date(s) analyses were performed;
3) The name of the company or entity that performed the analysis;
4) The analytical techniques or methods used;
5) The results of such analysis; and
6) The operating conditions as existing at the time of sampling or measurement.

D. RIGHT OF INSPECTION OF RECORDS: [County Rule 100 §106] [SIP Rule 40 D]
When the Control Officer has reasonable cause to believe that the Permittee has violated or is in violation of any provision of County Rule 100 or any County Rule adopted under County Rule 100, or any requirement of this permit, the Control Officer may request, in writing, that the Permittee produce all existing books, records, and other documents evidencing tests, inspections, or studies which may reasonably relate to compliance or noncompliance with County Rules adopted under County Rule 100. No person shall fail nor refuse to produce all existing documents required in such written request by the Control Officer.

16. REPORTING:

NOTE: See the Permit Condition titled Certification Of Truth, Accuracy and Completeness in conjunction with reporting requirements.

A. ANNUAL EMISSION INVENTORY REPORT:
[County Rule 100 §505] [SIP Rule 40 B]
Upon request of the Control Officer and as directed by the Control Officer, the Permittee shall complete and shall submit to the Control Officer an annual emissions inventory report. The report is due by April 30, or 90 days after the Control Officer makes the inventory form(s) available, whichever occurs later.
The annual emissions inventory report shall be in the format provided by the Control Officer.
The Control Officer may require submittal of supplemental emissions inventory information forms for air contaminants under ARS §49-476.01, ARS §49-480.03 and ARS §49-480.04.

B. DATA REPORTING: [County Rule 100 §502]
When requested by the Control Officer, the Permittee shall furnish to the Maricopa County Air Quality Division (Division hereafter) information to locate and classify air contaminant sources according to type, level, duration, frequency, and other characteristics of emissions and such other information as may be necessary. This information shall be sufficient to evaluate the effect on air quality and compliance with the County or SIP Rules. The Permittee may subsequently be required to submit annually, or at such intervals specified by the Control Officer, reports detailing any changes in the nature of the source since the previous report and the total annual quantities of materials used or air contaminants emitted.

C. DEVIATION REPORTING: [County Rule 210 §§302.1e & 305.1c]
The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions. Unless specified otherwise elsewhere in these Permit Conditions, an upset for the purposes of this Permit Condition shall be defined as the operation of any process, equipment or air pollution control device outside of either its normal design criteria or operating conditions specified in this Permit and which results in an exceedance of any applicable emission limitation or standard. The Permittee shall submit the report to the Control Officer by certified mail, facsimile, or hand delivery within 2 working days from knowledge of the deviation. The report shall contain a description of the probable cause of such deviations and any corrective actions or preventive measures taken. In addition, the Permittee shall report within a reasonable time of any long-term corrective actions or preventative actions taken as the result of any deviations from permit requirements.
All instances of deviations from the requirements of this Permit shall also be clearly identified in the semiannual monitoring reports required in the Specific Condition section of these Permit Conditions.

D. EMERGENCY REPORTING: [County Rule 130 §402.4]

(NOTE: Emergency Reporting is one of the special requirements which must be met by a Permittee wishing to claim an affirmative defense under the emergency provisions of County Rule 130. These provisions are listed earlier in these General Conditions in the section titled "Emergency Provisions". Since it is a form of deviation reporting, the filing of an emergency report also satisfies the requirement of County Rule 210 to file a deviation report.)

The Permittee shall, as soon as possible, telephone the Control Officer giving notice of the emergency, and submitted notice of the emergency to the Control Officer by certified mail, facsimile, or hand delivery within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

E. EMISSION STATEMENTS REQUIRED AS STATED IN THE ACT:

[County Rule 100 §503]

Upon request of the Control Officer and as directed by the Control Officer, the Permittee shall provide the Control Officer with an emission statement, in such form as the Control Officer prescribes, showing measured actual emissions or estimated actual emissions of NO_x and volatile organic compounds (VOC) from that source. At a minimum, the emission statement shall contain all information contained in the "Guidance on Emission Statements" document as described in the USEPA's Aerometric Information Retrieval System (AIRS) Fixed Format Report (AFP 644). The statement shall contain emissions for the time period specified by the Control Officer. Statements shall be submitted annually.

F. EXCESS EMISSIONS REPORTING:

[County Rule 140 §500] [locally enforceable only]

(NOTE: This reporting subsection is associated with the requirements listed earlier in these General Conditions in the section titled "Excess Emissions".)

1) The owner and/or operator of any source shall report to the Control Officer any emissions in excess of the limits established by the County or SIP Rules or by these Permit Conditions. The report shall be in two parts as specified below:
   a) Notification by telephone or facsimile within 24 hours of the time when the owner and/or operator first learned of the occurrence of excess emissions that includes all available information from paragraph 2) of this Permit Condition.
   b) Detailed written notification by submission of an excess emissions report within 72 hours of the notification required by paragraph 1) a) of this Permit Condition.

2) The excess emissions report shall contain the following information:
   a) The identity of each stack or other emission point where the excess emissions occurred;
   b) The magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
   c) The time and duration or expected duration of the excess emissions;
   d) The identity of the equipment from which the excess emissions emanated;
   e) The nature and cause of such emissions;
   f) The steps taken, if the excess emissions were the result of a malfunction, to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions;
   g) The steps that were or are being taken to limit the excess emissions; and

h) If this Permit contains procedures governing source operation during periods of startup or malfunction and the excess emissions resulted from startup or malfunction, a list of the steps taken to comply with the Permit procedures.

3) In the case of continuous or recurring excess emissions, the notification requirements of this Permit Condition shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in the notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period or changes in the nature of the emissions as originally reported shall require additional notification pursuant to paragraphs 1) and 2) of this Permit Condition.

G. OTHER REPORTING: [County Rule 210 §302.1h(5)]
The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for revising, revoking and reissuing this permit, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by this Permit. For information claimed to be confidential, the Permittee shall furnish a copy of such records directly to the Administrator of the USEPA along with a claim of confidentiality as covered elsewhere in these Permit Conditions.

17. RIGHT TO ENTRY AND INSPECTION OF PREMISES:

[County Rule 100 §105] [County Rule 210 §305.1f] [SIP Rule 43]

The Control Officer, during reasonable hours, for the purpose of enforcing and administering County Rules or any provision of ARS relating to the emission or control prescribed pursuant thereto, may enter every building, premises, or other place, except the interior of structures used as private residences. Every person is guilty of a petty offense under ARS §49-488 who in any way denies, obstructs or hampers such entrance or inspection that is lawfully authorized by warrant.

The Permittee shall allow the Control Officer or his authorized representative, upon presentation of proper credentials and other documents as may be required by law, to:

A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
C. Inspect, at reasonable times, any sources, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
E. To record any inspection by use of written, electronic, magnetic, and photographic media.

[Locally enforceable only]

SPECIFIC CONDITIONS:

18. ALLOWABLE EMISSIONS LIMITATIONS

A. Microturbine (Alternative Scenario #2 - AOS#2)

The Permittee shall not allow emissions from the microturbine to exceed any of the following limits:

1) 25 ppm of NOx @ 15% O_2
2) 200 ppm of CO @ 15% O_2

[County Rule 241 §302]

B. IC Engines (Alternative Scenario #1 - AOS#1)

The Permittee shall not allow emissions from the IC engines to exceed any of the following limits:

1) 0.6 grams of oxides of nitrogen per brake horsepower-hour (0.6 g/bhp-hr).
2) 2.5 grams of carbon monoxide per brake horsepower-hour (2.5 g/bhp-hr).

[County Rule 241 §302]

C. Gasoline Storage Tank [County Rule 210 §301.4.b]

The Permittee shall not allow emissions of Volatile Organic Compounds (VOC) into the atmosphere from the gasoline storage and vehicle fueling operations to exceed 600 pounds per month nor more than 2,400 pounds per year.

D. Opacity

1) The Permittee shall not discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20 percent opacity, except as provided in County Rule 300 §302.

[County Rule 300 §301][locally enforceable only]

2) Except as otherwise provided in Regulation I, Rule 4, Exceptions, the opacity of any plume or effluent from any source of emissions, other than uncombined water, shall not be greater than 40 percent opacity as determined by Reference Method 9 in the Arizona Testing Manual.

[SIP Rule 30]

E. Fugitive Dust Sources

The Permittee shall not allow visible fugitive dust emissions to exceed 20% opacity. Exceedances of the opacity limit that occur due to a wind event shall constitute a violation of the opacity limit. However, it shall be an affirmative defense in an enforcement action if the Permittee demonstrates all of the following conditions:

1) All control measures required were followed and one or more of the control measures listed below were applied and maintained;
   a) Cease dust-generating operations for the duration of the condition/situation/event when the 60-minute average wind speed is greater than 25 miles per hour. If dust generating operations are ceased for the remainder of the work day, stabilization measures must be implemented; or
   b) Apply water or other suitable dust suppressant twice per hour; or
   c) Apply water as necessary to maintain a soil moisture content at a minimum of 12% as determined by ASTM Method D2216-98 or other equivalent as approved by the Control Officer and the Administer of EPA. For areas which have an optimum moisture content for compaction of less than 12% as determined by ASTM Method D1557-91(1998) or other equivalent as approved by the Control

Officer and the Administer of EPA, maintain at least 70% of the optimum soil moisture content; or

d) Construct fences or 3-5 foot high wind barriers with 50% or less porosity adjacent to roadways or urban areas that reduce the amount of wind-blown material leaving the site. (Must be implemented with b) or c), above.

2) The 20% opacity exceedance could not have been prevented by better application, implementation, operation, or maintenance of control measures;

3) The Permittee compiled and retained records, in accordance with the recordkeeping requirements of this permit; and

4) The occurrence of a wind event on the day(s) in question is documented by records. The occurrence of a wind event must be determined by the nearest Maricopa County Environmental Services Department Air Quality Division monitoring station, from any other certified meteorological station, or by a wind instrument that is calibrated according to manufacturer's standards and that is located at the site being checked.

[County Rule 310 §301 and Table 2][SIP Rule 310 §301 and Table 2]

F. SOx

The Permittee shall not emit into the ambient air any sulfur oxide or sulfuric acid in such manner and amounts as to result in ground level concentrations at any one place beyond the premises on which the source is located exceeding those limits shown in the following table:

Table 1: SO_x Emission Limits

Concentration of SO_x	Averaging Time
850µg/m^3	1 hour
250µg/m^3	24 hour
120µg/m^3	72 hour

[SIP Rule 32]

G. H_2S

The Permittee shall not emit hydrogen sulfide (H_2S) from any location in such a manner or amount that the concentration of such emissions in the ambient air at any occupied place beyond the premises on which the source is located exceeds 0.03 parts per million by volume (ppm_v) for any averaging period of 30 minutes or more.

[County Rule 320 §304]

19. OPERATIONAL LIMITATIONS AND STANDARDS

A. Operational Requirements for the Collection and Control System

1) The Permittee's active collection system shall meet the following requirements:
   a) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;
   b) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of:
      (1) 5 years or more if active; or
      (2) 2 years or more if closed or at final grade.
   c) Collect gas at a sufficient extraction rate;
   d) Be designed to minimize off-site migration of subsurface gas.

[40 CFR 60 §752 (b)(2)(ii)(A) *(1)* through *(4)*][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

2) Route all the collected gas to a control system that complies with the requirements in either a), b) or c) of this section.
   a) The existing open flare designed and operated in accordance with 40 CFR 60 §18;
   b) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight-percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in 40 CFR 60 §756(b).
   c) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of 40 CFR 60.752(b)(2)(iii)(A) or (B).

[40 CFR 60 §752 (b)(2)(iii)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

3) Operate the collection and control device installed to comply with 40 CFR Part 60 §752 in accordance with the provisions of 40 CFR 60 §753, 40 CFR 60 §755 and 40 CFR 60 §756.

[40 CFR 60 §752 (b)(2)*(iv)*][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

4) The collection and control system may be capped or removed provided that all the following conditions of these Permit Conditions are met:
   a) The landfill shall be a closed landfill as defined in 40 CFR 60 §§751.
   b) The collection and control system shall have been in operation a minimum of 15 years; and
   c) Following the procedures specified in 40 CFR 60 §754(b), the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

[40 CFR 60 §752(b)(2)(v)][County Rule 360 §301.74]

[County Rule 321 §301 (locally enforceable only)]

5) The Permittee of an active collection and control system used to comply with the provisions of 40 CFR 60 §752(b)(2)(ii) shall meets the following requirements:

a) Operate the collections system such that the gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:

(1) 5 years or more if active; or

(2) 2 years or more if closed or at final grade;

[40 CFR 60 §753 (a)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

b) Operate the collection system with negative pressure at each wellhead except under the following conditions:

(1) A fire or increased well temperature. The Permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 40 CFR 60 §757(f)(1);

(2) Use of a geomembrane or synthetic cover. The Permittee shall develop acceptable pressure limits in the design plan;

(3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Administrator and the Control Officer;

[40 CFR 60 §753 (b)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55ºC and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The Permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

[40 CFR 60 §753 (c)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

(1) The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by 40 CFR 60 §752(b)(2)(i).

[40 CFR 60 §753 (c)(1)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

(2) Unless an alternative test method is established as allowed by 40 CFR 60 §752(b)(2)(i), the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that:

(a) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;

(b) A data recorder is not required;

(c) Only two calibration gases are required, a zero and span, and ambient air may be used as the span;

(d) A calibration error check is not required;

(e) The allowable sample bias, zero drift, and calibration drift are ±10 percent.

[40 CFR 60 §753 (c)(2)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface to the landfill. To determine if this level is exceeded, the Permittee shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The Permittee may establish an alternative-traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30-meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

[40 CFR 60 §753 (d)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

e) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR 60 §752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour; and

[40 CFR 60 §753 (e)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

f) Operate the control or treatment system at all times when the collected gas is routed to the system.

[40 CFR 60 §753 (f)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

g) If monitoring demonstrates that the operational requirements in paragraphs (b), (c), or (d) of 40 CFR 60 §753 are not met, corrective action shall be taken as specified in 40 CFR 60 §755(a)(3) through (5) or 40 CFR 60 §755(c). If corrective actions are taken as specified in 40 CFR 60 §755, the monitored exceedance is not a violation of the operational requirements of 40 CFR 60 §753.

[40 CFR 60 §753 (g)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

6) If a positive pressure exists at the gas collection header, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under 40 CFR 60 §753(b). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator and Control Officer for approval.

[40 CFR 60 §755 (a)(3)][County Rule 360 §301.74]

[County Rule 321 §301 (locally enforceable only)]

7) The Permittee is not required to expand the system as required in 40 CFR 60.755(a)(3) during the first 180 days after gas collection system startup.

[40 CFR 60 §755 (a)(4)][County Rule 360 §301.74]
[County Rule 321 §321 (locally enforceable only)]

8) If a well exceeds one of the operating parameters described in 40 CFR 60.755(a)(5), action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator and Control Officer for approval.

[40 CFR 60 §755 (a)(5)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

9) For purposes of compliance with 40 CFR 60 §753(a), the Permittee shall place each well or design component as specified in the approved design plan as provided in 40 CFR 60 §752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of:
   a) 5 years or more if active; or
   b) 2 years or more if closed or at final grade.

[40 CFR 60 §755 (b)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

10) The Permittee seeking to comply with 40 CFR 60 §752(b)(2)(ii)(A) for an active gas collection system shall install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:
   a) Measure the gauge pressure in the gas collection header on a monthly basis as provided in 40 CFR 60 §755(a)(3);
   b) Monitor nitrogen and oxygen concentration in the landfill gas on a monthly basis as provided in 40 CFR 60 §755(a)(5);
   c) Monitor temperature of the landfill gas on a monthly basis as provided in 40 CFR 60 §755(a)(5).

[40 CFR 60 §756 (a)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

11) The Permittee seeking to comply with 40 CFR 60 §752(b)(2)(iii) using the existing open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:
   a) A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.
   b) A device that records flow to or bypass of the flare. The Permittee shall either:
      (1) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or

(2) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

[40 CFR 60 §756 (b)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

12) The Permittee seeking to demonstrate compliance with 40 CFR 60 §755(c) shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in 40 CFR 60 §755(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

[40 CFR 60 §756 (f)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

13) The Permittee shall comply with the collection and control system design plan approved by the Department, including the elements listed in 40 CFR 60.759: alternate operating scenario(s), test methods, procedures, compliance measures, monitoring, recordkeeping and/or reporting provisions of 40 CFR 60 §§753 through 758.

[40 CFR §60.759][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

B. Operational Requirements for the Flare

[40 CFR 60 §§18(c) and (e)][County Rule 360 §301.1]

1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in 40 CFR 60.18(f) except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
2) Flares shall be operated with a flame present at all times, as determined by the methods specified in 40 CFR 60.18(f).
3) The Permittee has the choice of adhering to either the heat content specifications in Subsection a) and the maximum tip velocity specifications in 40 CFR 60.18(c)(4), or adhering to the requirements in Subsection c).
   a) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity, V_{max} as determined by the following equation:

$$V_{max} = (X_{H2} - K_1) * K_2$$

Where:
V_{max} = Maximum permitted velocity, m/sec
K_1 = Constant, 6.0 volume-percent hydrogen
K_2 = Constant, 3.9 (m/sec)/volume-percent hydrogen
X_{H2} = The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM)

Method D1946-77 (Incorporated by reference as specified in 40 CFR 60.17)

b) The actual exit velocity of the flare shall be determined by the method specified in 40 CFR 60.18(f)(4).

c) Flares shall be used only with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater. The net heating value of the gas being combusted shall be determined by the methods specified in 40 CFR 60.18(f)(3) of this section.

4) Nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), less than 18.3 m/sec (60 ft/sec), except as provided in 40 CFR 60.18(c)(4)(ii) and (iii).

Nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), equal to or greater than 18.3 m/sec (60 ft/sec), but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1000 Btu/hr).

Nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), less than the velocity, Vmax, as determined by the method specified in 40 CFR 60.18(f)(5), and less than 122 m/sec (400 ft/sec) are allowed.

5) Flares shall be operated at all times when emissions may be vented to them.

C. Operational Requirements for Fugitive Dust Sources

1) Stabilization Requirements

a) The Permittee shall not allow visible fugitive dust emissions from unpaved Haul/Access Roads and unpaved parking lots to exceed 20% opacity and either;

(1) shall not allow silt loading equal to or greater than 0.33 oz/ft^2;

(2) shall not allow the silt content to exceed 6%.

b) The Permittee shall, as an alternative to meeting the stabilization requirements for an unpaved haul/access road, limit vehicle trips to no more than 20 per day and limit vehicle speeds to no more than 15 miles per hour. If complying with subsection 302.2(b) of County Rule 310, the Permittee must include, in the Dust Control Plan, the number of vehicles traveled on the unpaved haul/access road (i.e. number of employee vehicles, earthmoving equipment, haul trucks and water trucks)

[County Rule 310 §302.1 and 2][SIP Rule 310 §302.1 and 2]

c) The Permittee shall meet at least one of the standards below, as applicable, for any open areas and vacant lots or disturbed surface areas on which no activity is occurring. The Permittee shall be considered in violation of Maricopa County Rule 310 if such inactive disturbed area is not maintained in a manner that meets at least one of the standards described below, as applicable.

(1) Maintain visible crust; or

(2) Maintain a threshold friction velocity (TFV) for disturbed surface areas corrected for non-erodible elements of 100 cm/second or higher; or

(3) Maintain a flat vegetative cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50%; or

(4) Maintain a standing vegetative cover (i.e, vegetation that is attached (rooted) with a predominant vertical orientation) that is equal or greater than 30%; or

(5) Maintain a standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and wher the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements; or

(6) Maintain a percent cover that is equal to or greater than 10% for non-erodible elements; or

(7) Comply with a standard of an alternative test method, upon obtaining the written approval from the Control Officer and the Administrator of the Environmental Protection Agency (EPA).

[Maricopa County Rule 310 §302.3][SIP Rule 310 §302.3]

2) Control Measures: The Permittee shall implement control measures before, after and while conducting any dust generating operation, including during weekends, after work hours, and on holidays. See subsection 304.3, Table 1 and Table 2 of County Rule 310. For the purpose of these Permit Conditions, any control measure that is implemented must meet the applicable standard(s) described in County Rule 310 §§301 and 302, as determined by the corresponding test method(s), as applicable, and must meet other applicable standard(s) set forth in County Rule 310. Failure to comply with the provision of County Rule 310 §308 (Work Practices), as applicable, and/or of an approved Dust Control Plan, is deemed a violation of this Permit.

[County Rule 310 §306][SIP Rule 310 §306]

3) Should any primary control measures(s) in an approved Dust Control Plan prove ineffective, the Permittee shall immediately implement the contingency control measure, which may obviate the requirement of submitting a revised Dust Control Plan.

[County Rule 310 §303.2][SIP Rule 310 §303.2]

4) Work Practices: The Permittee shall comply with the following work practices and control measures:

[County Rule 310 §308 and Table 1] [SIP Rule 310 §308]
[SIP Rule 31]

a) Bulk Material Hauling/Transporting **Off-Site** onto Paved Public Roadways

(1) Load all haul trucks such that the freeboard is not less than three inches;

(2) Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/pr tailgate(s);

(3) Cover all haul trucks with a tarp or other suitable closure;

(4) Before the empty haul truck leaves the site, clean the interior of the cargo compartment or cover the cargo compartment.

b) Bulk Material Hauling/Transporting **On-Site** Within the Boundaries of the Work Site: When crossing a public roadway upon which the public is allowed to travel while construction is underway:

(1) Load all haul trucks such that the freeboard is not less than three inches; and

(2) Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and

(3) Install a suitable trackout control device that controls and prevents trackout and/or removes particulate matter from tires and the exterior surfaces of haul trucks and/or motor vehicles that traverse such work site. Examples of trackout control devices are described in Table 1 (Trackout-1J, 2J, 3J) of Maricopa County Rule 310.

c) When **On-Site** Hauling/Transporting Within the Boundaries of the Work Site but **Not Crossing A Public Roadway** upon which the Public is Allowed to Travel While Construction is Underway:

(1) Limit vehicular speeds to 15 miles per hour or less while traveling on the work site; or

(2) Apply water to the top of the load such that the 20% opacity standard, as described in Section 301 of Maricopa County Rule 310, is not exceeded, or cover haul trucks with a tarp or other suitable closure.

d) Bulk Material Handling Operations and Open Storage Piles:

For the purpose of this permit, an open storage pile is any accumulation of bulk material with a 5% or greater silt content which in any one point attains a height of three feet and covers a total surface area of 150 square feet or more. Silt content shall be assumed to be 5% or greater unless a person can show, by testing in accordance with ASTM Method C136-96A or other equivalent method approved in writing by the Control Officer and the Administrator of EPA, that the silt content is less than 5%.

(1) During Stacking, Loading, And Unloading Operations apply water as necessary, to maintain compliance with Rule 310 Section 301; and

(2) When Not Conducting Stacking, Loading, And Unloading Operations:

(a) Cover open storage piles with tarps, plastic, or other material to prevent wind from removing the coverings; or

(b) Apply water to maintain a soil moisture content at a minimum of 12%, as determined by ASTM Method D2216-98, or other equivalent as approved by the Control Officer and the Administrator of EPA. For areas which have an optimum moisture content for compaction of less than 12%, as determined by ASTM Method D1557-91(1998) or other equivalent approved by the Control Officer and the Administrator of EPA, maintain at least 70% of the optimum soil moisture content; or

(c) Meet the stabilization requirements described in Rule 310 Section 302.3; or

(d) Construct and maintain wind barriers, storage silos, or a three-sided enclosure with walls, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and whose porosity is no more than 50%. If implementing this subsection, must also implement subsection (b) or (c) above.

e) Spillage, Carry-Out, Erosion, And/Or Trackout:

(1) Install a suitable trackout control device that controls and prevents trackout and/or removes particulate matter from tires and the exterior surfaces of

haul trucks and/or motor vehicles that traverse such work site at all exits onto a paved public roadway *(Examples of trackout control devices are described in Table 1 (Trackout-1J, 2J, 3J) of Maricopa County Rule 310)*:

(a) From all work sites with a disturbed surface area of five acres or larger.

(b) From all work sites where 100 cubic yards of bulk materials are hauled on-site and/or off-site per day.

(2) Cleanup spillage, carry-out, erosion, and/or trackout on the following time-schedule:

(a) Immediately, when spillage, carry-out, and/or trackout extends a cumulative distance of 50 linear feet or more; or

(b) At the end of the workday, when spillage, carry-out, erosion, and/or trackout are other than the spillage, carry-out, erosion, and/or trackout described above, in Maricopa County Rule 310 Section 308.3(b)(1).

f) Earthmoving Operations On Disturbed Surface Areas 1 Acre Or Larger: If water is the chosen control measure, operate water application system (e.g., water truck) while conducting earthmoving operations on disturbed surface areas 1 acre or larger.

g) Easements, Rights-of-Way, and Access Roads for Utilities (Electricity, Natural Gas, Oil, Water and Gas Transmission):

(1) Restrict vehicular speeds to 15 miles per hour and vehicular trips to no more than 20 per day; or

(2) Implement control measures as described in the following section "Unpaved Haul/Access Roads".

h) Unpaved Haul/Access Roads:
Apply one or more of the following:

(1) Limit vehicle speed to 15 miles per hour or less and limit vehicular trips to no more than 20 per day.

(2) Apply water, so that surface is visibly moist and to meet the requirement of Rule 310 §302.2.

(3) Pave

(4) Apply and maintain gravel, recycled asphalt, or other suitable material, in compliance with subsection 302.2 of Maricopa County Rule 310.

(5) Apply a suitable dust suppressant, in compliance with subsection 302.2 of Maricopa County Rule 310.

i) Vehicle Use in Open Areas and Vacant Lots. If open areas and vacant lots are 0.10 acre or larger and have a cumulative of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, then the Permittee shall implement one of the control measures described in the following subsections within 60 calendar days following the initial discovery of vehicle use on open areas and vacant lots. Use of or parking on open areas and vacant lots by the Permittee of such open areas and vacant lots and/or landscape maintenance of such open areas and vacant lots shall not be considered vehicle use in open areas and vacant lots. Landscape maintenance does not include

grading, trenching, nor any other mechanized surface disturbing activities performed to establish initial landscapes or to redesign existing landscapes.

(1) Prevent motor vehicle and/or off-road vehicle trespassing, parking, and/or access, by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees, or other effective control measures. Once vehicular traffic has been restricted from an open area or a vacant lot, such open area or vacant lot is no longer subject to the requirements described in this section, but rather such open area and vacant lot is subject to the requirements of Rule 310.01 §302.

(2) Uniformly apply and maintain surface gravel or chemical/organic stabilizers to all areas disturbed by motor vehicles and/or off-road vehicles in compliance with one of the stabilization limitations described in subsection 301.2 of Maricopa County Rule 310.01.

(3) Apply and maintain an alternative control measure approved in writing by the Control Officer and the Administrator of the Environmental Protection Agency (EPA).

[County Rule 310.01 §301][SIP Rule 310.01 §301]

j) Unpaved Parking Lots: The Permittee shall implement one or more of the following control measures. The Permittee shall implement either one of the control measures described in subsection (b) or (c) below if vehicles are parked on the unpaved parking lot no more than 35 days per year, excluding days on which ten or fewer vehicles enter, for the duration of time that over 100 vehicles enter and/or park on such unpaved parking lot.

(1) Pave.

(2) Uniformly apply and maintain surface gravel, recycled asphalt, or other suitable material, in compliance with subsection 303.2 of Maricopa County Rule 310.01.

(3) Apply dust suppressants, in compliance with subsection 303.2 of Maricopa County Rule 310.01.

[County Rule 310.01 §303][SIP Rule 310.01 §303]

D. Operational Requirements for Gasoline Storage Tank

1) The Permittee shall limit gasoline deliveries to less than 120,000 gallons in any 12 consecutive calendar months.

[County Rule 353 §305.2][SIP Rule 353 §303.2]

2) Basic Tank Integrity: No vapor or liquid escapes are allowed through a dispensing tank's outer surfaces, nor from any of the joints where the tank is connected to pipe(s), wires or other system.

a) VOC Emissions Standard:
Tanks and their fittings shall be vapor tight except for the outlet of a pressure/vacuum relief valve on a dispensing tank's vent pipe. Specifically, this means that at a probe tip distance of 1 inch (2.5 cm) from a surface, no vapor escape shall exceed 1/5 of the lower explosive limit. This applies to tanks containing gasoline regardless of whether they are currently being filled, and to caps and other tank fittings.

[County Rule 353 §301.1][SIP Rule 353 §301.1]

b) Leakage Limits –Liquid Leaks and Spills:

(1) Gasoline storage and receiving operations shall be leak free. Specifically, no liquid gasoline escape of more than 3 drops per minute is allowed. This includes leaks through the walls of piping, fittings, fill hose(s), and vapor hose(s).

(2) There shall be no excess gasoline drainage from the end of a fill hose or a vapor hose. Specifically, not more than 2 teaspoonful of gasoline shall be lost in the course of a connect or disconnect process.

[County Rule 353 §301.2][SIP Rule 353 §301.2]

c) Spill Containment Equipment: The entire spill containment system including gaskets shall be kept vapor-tight.

(1) The Spill Containment Receptacle:

(a) The outer surface of the spill containment receptacle shall have no holes or cracks and shall allow no vapors to pass from the dispensing tank through it to the atmosphere.
(b) Spill containment receptacles shall be kept clean and free of foreign material at all times.
(c) Spill containment receptacles shall be inspected at least weekly. Records of inspection and cleaning shall be kept in accordance with the recordkeeping requirements of these permit conditions.

(2) If the spill containment is equipped with a passageway to allow material trapped by the containment system to flow into the interior of the dispensing tank:

(a) The passageway shall be kept vapor tight at all times, except during the short period when a person opens the passageway to immediately drain material trapped by the containment system into the tank.
(b) The bottom of the receptacle shall be designed and kept such that no puddles of gasoline are left after draining through the passageway has ceased.

(3) The Permittee is responsible for assuring that before a delivery vessel leaves the premises after a delivery:

(c) Any gasoline in a dispensing tank's spill containment receptacle has been removed.
(d) Any gasoline that a person has taken out of a spill receptacle, as a free liquid or as absorbed into/onto other material removed from the receptacle, shall be contained in such a way that VOC emission is prevented; disposal in conformance with applicable hazardous waste rules is sufficient to meet this requirement.
(e) Any plunger/stopper assembly is unimpeded and sealing correctly.

(4) Criteria Of Violation/Exceedance For Spill-Containment Receptacles: A reading on a CGD or OVA exceeding 1/5 LEL (10,000 ppm as methane) is

an exceedance. The procedure for performing a determination is set forth in County Rule 504.3.

[County Rule 353 §301.3][SIP Rule 353 §301.3]

1) Fill Pipe Requirements

a) Each fill-line into a stationary dispensing tank shall be equipped with a permanent submerged fill pipe that has a discharge opening which is completely submerged when the liquid level is 6 inches above the tank bottom.

(1) Threads, gaskets, and mating surfaces of the fill pipe assembly shall be designed and maintained tight. There shall be no liquid or vapor leakage at the joints of the assembly.
(2) The Permittee is responsible to assure that external fittings of a fill pipe assembly shall be inspected weekly to assure that cap, gasket, and piping are intact and are not loose.
(a) A record of the inspection shall be made in accordance with the recordkeeping requirements of these permit conditions.
(b) The Permittee shall act to prevent driver/deliverers from connecting the delivery hose coupling to a fill pipe coupling with so much twisting force that the fill pipe assembly is loosened. One method of complying is to have a CARB-certified swivel coupling as part of the fill pipe assembly (reference subsection 503.4 for CARB).

[County Rule 353 §302.1][SIP Rule 353 §302.1]

b) Fill Pipe Caps:

(1) The cap shall have a securely attached, intact gasket.
(2) The cap and its gasket shall always function properly, latch completely so that it cannot then be easily twisted by hand, and have no structural defects.
(3) The cap of a gasoline fill pipe shall always be fastened securely on the fill pipe except immediately before, during, and immediately after:
(a) "Sticking" the tank to measure gasoline depth.
(b) Delivering gasoline into the tank.
(c) Doing testing, maintenance or inspection on the gasoline/vapor system.
(4) Do not unfasten or remove a fill pipe cap unless every other fill pipe is either securely capped or connected to a delivery hose, except as otherwise needed for testing, maintenance, or inspection.

[County Rule 353 §302.2][SIP Rule 353 §302.2]

c) Fill Pipe Obstructions:

(1) Any type of screen and/or other obstructions in fill pipe assemblies shall be permanently removed by November 1, 1999, unless it is specifically allowed by an Air Pollution Permit or is CARB-certified, as referenced in subsection 503.4.
(2) A screen or other obstruction, allowed by Air Pollution Permit or CARB, shall be temporarily removed by the Permittee prior to inspection by the Control Officer to allow measurements pursuant to this rule.

[County Rule 353 §302.4][SIP Rule 353 §302.4]

d) Overfill Protection Equipment: Overfill prevention equipment shall be vapor tight to the atmosphere. Any device mounted within the fill pipe shall be so designed and maintained that no vapor from the vapor space above the gasoline within the tank can penetrate into the fill pipe or through any of the fill pipe assembly into the atmosphere.

[County Rule 353 §302.5][SIP Rule 353 §302.5]

E. Operational Requirements for StormWater Pump Engine

1) The rolling twelve-month use of the engine shall not exceed 1,386 hours.

2) The Permittee shall use any fuel that contains no more than 0.05% sulfur by weight, alone or in combination with other fuels in the StormWater Pump Engine.

[County Rule 210 §302.1(c)(Locally enforceable only)]

F. Operational Requirements for Engines/Microturbines

1) The Permittee shall only use landfill gas collected at Butterfield landfill to operate power generating engines and microturbine.

[40 CFR §71.6(b)]
[County Rule 210 §302.1(c)(Locally enforceable only)]

2) Each power generating engine and microturbine at this facility shall be designed and operated to either reduce nonmethane organic compounds (NMOC) by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis (ppmvd) as hexane at 3 percent oxygen.

[40 CFR §60.752(b)(2)(iii)(B)][County Rule 360 §301.74]

3) The power generating engines and the microturbine shall be operated within the parameter ranges established during the initial or most recent performance test.

[40 CFR §62.14353(b)][40 CFR §60.752(b)(2)(iii)(B)(2)]
[County Rule 360 §301.74][County Rule 321 §301 (locally enforceable only)]

4) Good Combustion Practices: The Permittee shall conduct preventative maintenance or tuning procedures recommended by the engine/microturbine manufacturer to ensure good combustion practices to minimize NOx emissions. In lieu of a manufacturer's procedure, a different procedure specified by any other maintenance guideline may be used as a default procedure.

[County Rule 210 §302.1.b][County Rule 241 §302]

G. Operational Requirements for Liquid Waste Stabilization and Petroleum Contamintanated Soil Disposal

1) VOC Containment: Materials including, but not limited to, solvents or other volatile compounds, paints, acids, alkalizes, pesticides, fertilizer and manure shall be processed, stored, used and transported in such a manner and by such means that they will not unreasonably evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices or equipment shall be mandatory.

[County Rule 320 §302][SIP Rule 32C]

2) The Permittee may receive waste with free liquid (liquid waste) from off-site generators and manage on-site generated liquid waste in accordance with the following requirements:

a) Contaminated liquid waste is defined as liquid waste having a vapor pressure of 1.5 psia (77.5 mm Hg) or greater.

b) Following acceptance to the facility, wastes with a liquid component shall be solidified in a designated area, storage tank or evaporation pond by mixing them with soil.

[County Rule 241 §302][County Rule 320 §302]

c) Following solidification, wastes with a liquid component with a VOC content of 40 parts per million by weight (ppmw) or less shall be used as cover material within the landfill

[County Rule 241 §302][County Rule 320 §302]

c) The Permittee shall use for cover materials only liquid and solid waste materials with a Volatile Organic Compound (VOC) content of 40 parts per million by weight (ppmw) or less when received. Materials with a VOC content greater than 40 ppmw, after solidification, shall be buried directly into the landfill using earthmoving equipment as quickly as possible to prevent evaporation.

[County Rule 241 §302][County Rule 320 §302]

d) The Permittee shall not dilute the VOC concentration level in the waste stream in order to reduce the concentration of VOCs below the 40 ppmw threshold limit.

[County Rule 241 §302][County Rule 320 §302]

e) The Permittee shall not process liquid waste material containing VOCs at a rate of more than 8.5 million gallons per month nor more than 84 million gallons during any 12 consecutive calendar months.

[County Rule 210 §302.1.b]

3) The Permittee may receive waste containing soil contaminated with petroleum products from off-site generators in accordance with the following requirements:

a) Immediately after delivery of contaminated soil to the landfill, the Permittee shall cover the soil with a minimum of six inches of compacted daily cover material, compacted municipal solid waste, or other approved material. Petroleum contaminated soil is defined as soil that contains more than 40 ppmw of benzene, toluene, ethylbenzene or xylenes (BTEX) or 100 ppmw total volatile organic compounds (VOCs), and, in either case, having a true vapor pressure of 1.5 psia (77.5 mm Hg) or greater.

The analytical method for evaluating the concentration of BTEX in soil contaminated with petroleum hydrocarbons shall be EPA Method 8021. The analysis method for evaluating total VOCs in soil, excluding petroleum hydrocarbons, shall be EPA Method 8260.

b) Petroleum contaminated soil shall not be stockpiled, spread out or used as cover material.

[County Rule 210 §302.1(b)(Locally enforceable only)]
[County Rule 241 §302][County Rule 320 §302]

H. Facility-Wide Requirements

1) Odors: The Permittee shall not emit gaseous or odorous air contaminants from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution.

[County Rule 320 § 300] [SIP Rule 32A]

2) Stacks: Where a stack, vent or other outlet is at such a level that air contaminants are discharged to adjoining property, the Control Officer may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet to a degree that will adequately dilute, reduce or eliminate the discharge of air contaminants to adjoining property.

[County Rule 320 §303] [locally enforceable only]

3) Asbestos Disposal: The Permittee shall meet the requirements of this section:
   a) Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of paragraphs c) or d) of this section must be met.
   b) Unless a material barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as follows, or the requirements of paragraph c)(1) of this section must be met.
      (1) Warning signs must be displayed at all entrances and at intervals of 100 m (330 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. The warning signs must:
         (i) Be posted in such a manner and location that a person can easily read the legend; and
         (ii) Conform to the requirements of 51 cm * 36 cm (20" *14") upright format signs specified in 29 CFR §1910.145(d)(4) and this paragraph; and
         (iii) Display legend in the lower panel as specified in 40 CFR §61.154(a)(1)(iii).
      (2) The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public.
      (3) Upon request and supply of appropriate information, the Administrator will determine whether a fence or a natural barrier adequately deters access by the general public.
   c) Rather than meet the no visible emission requirement of paragraph a) of this section, at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall:
      (1) Be covered with at least 15 centimeters (6 inches) of compacted nonasbestos-containing material, or
      (2) Be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by Department. For purposes of this paragraph, any used, spent, or other waste oil is not considered a dust suppression agent.

d) Rather than meet the no visible emission requirements of paragraph a) of this section, use an alternative emissions control method that has received prior approval by the Department according to the procedures described in 40 CFR §61.149(c)(2).

[40 CFR §61.154][County Rule 370 §301.8]

20. MONITORING AND RECORDKEEPING REQUIREMENTS

A. Monitoring and Recordkeeping for Hydrogen Sulfide

The control officer reserves the right to require additional monitoring or testing for odoriferous compounds that might reasonably be expected to be emitted from the landfill.

[County Rule 200 §309][County Rule 320 §304]

B. Monitoring and Recordkeeping for the Collection and Control System

1) After the installation of a collection and control system in compliance with 40 CFR 60 §755, the Permittee shall calculate the NMOC emission rate for purposes of determining when the system can be removed as provided in 40 CFR 60 §752(b)(2)(v), using the following equation:

$M_{NMOC} = 1.89 \times 10^{-3} Q_{LFG} C_{NMOC}$
where,
M_{NOC} = mass emission rate of NMOC, megagrams per year
Q_{LFG} = flow rate of landfill gas, cubic meters per minute
C_{NMOC} = NMOC concentration, parts per million by volume as hexane

a) The flow rate of landfill gas, Q_{LFG}, shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of appendix A of 40 CFR 60.754.

b) The average NMOC concentration, C_{NMOC}, shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of appendix A of 40 CFR 60, the minimum list of compounds to be tested shall be those published in the most recent compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The landfill Permittee shall divide the NMOC concentration from Method 25 C of appendix A of 40 CFR 60 by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

c) The Permittee may use another method to determine landfill gas flow and NMOC concentration if the method has been approved by the Administrator and the Control Officer.

[40 CFR 60 §754 (b)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

2) Except as provided in 40 CFR 60 §752(b)(2)(i)(B), the following methods shall be used to determine whether the gas collection system is in compliance with 40 CFR 60 §752(b)(2)(ii).

a) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with 40 CFR 60 §752(b)(2)(ii)(A)(1), one of the following equations shall be used. The k and L_o kinetic factors should be those published in the most recent compilation of Air Pollutant Emission Factors (AP-42) or other site specific values demonstrated to be appropriate and approved by the Administrator and Control Officer. If k has been determined as specified in 40 CFR 60 §754(a)(4), the value of k determined from the test shall

be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

(1) For sites with unknown year-to-year solid waste acceptance rate:

$$Q_M = 2\ L_o R\left(e^{-kc} - e^{-kt}\right)$$

where,

Q_M = maximum expected gas generation flow rate, cubic meters per year
L_o = methane generation potential, cubic meters per megagram solid waste
R = average annual acceptance rate, megagrams per year
k = methane generation rate constant, $year^{-1}$
t = age of the landfill at equipment installation plus the time the Permittee intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years
c = time since closure, years (for an active landfill c = 0 and $e^{-kc} = 1$)

(2) For sites with known year-to-year solid waste acceptance rate:

$$Q_M = \sum_{i=1}^{n} 2\ k\ L_o M_i \left(e^{-kt_i}\right)$$

where,

Q_M = maximum expected gas generation flow rate, cubic meters per year
k = methane generation rate constant, $year^{-1}$
L_o = methane generation potential, cubic meters per megagram solid waste
M_i = mass of solid waste in the i^{th} section, megagrams
t_i = age of the i^{th} section, years

(3) If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in paragraphs 2)(a)(1) and (2) of this permit condition or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

b) For the purpose of determining sufficient density of gas collectors for compliance with 40 CFR 60 §752(b)(2)(ii)(A)(2), the Permittee shall design a system of vertical wells, horizontal collectors or other collection devices, satisfactory to the Administrator and Control Officer, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

c) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR 60 §752(b)(2)(ii)(A)(3), the Permittee shall measure gauge pressure in the gas collection header at each individual well, monthly.

d) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the Permittee shall monitor each well monthly for temperature and nitrogen or oxygen as provided in 40 CFR 60 §753(c).

[40 CFR 60 §§755 (a)(1), (2), (3) and (5)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

3) The following procedures shall be used for compliance with the surface methane operational standard as provided in 40 CFR 60 §753(d).
   a) After installation of the collection system, the Permittee shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in paragraph (d) of 40 CFR 60 §755.
   b) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.
   c) Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of appendix A of this part, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.
   d) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in 40 CFR60 §755(c)(4)(i) through (v) shall be taken. As long as the specified actions are taken the exceedance is not a violation of the operational requirements of 40 CFR 60 §753(d).
      (1) The location of each monitored exceedance shall be marked and the location recorded.
      (2) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of reach exceedance shall be made and the location shall be re-monitored within 10 calendar days of detecting the exceedance.
      (3) If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in 40 CFR60 §755(c)(4)(v) shall be taken, and no further monitoring of that location is required until the action specified in 40 CFR60 §755(c)(4)(v) has been taken.
      (4) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in 40 CFR60 §755(c)(4)(ii) or (iii) shall be re-monitored 1 month from the initial exceedance. If the 1-month re-monitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month re-monitoring shows an exceedance, the actions specified in 40 CFR60 §755(c)(4)(iii) or (v) shall be taken.
      (5) For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the

exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Administrator and Control Officer for approval.

e) The Permittee shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

[40 CFR 60 §755 (c)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

4) The Permittee seeking to comply with the provisions in 40 CFR60 §755(c) in the above permit conditions, shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices;

a) The portable analyzer shall meet the instrumentation specifications provided in section 3 of Method 21 of appendix A of 40 CFR 60 §755, except that "methane" shall replace all references to VOC.

b) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.

c) To meet the performance evaluation requirements in section 3.1.3 of Method 21 of appendix A of 40 CFR 60 §755, the instruments evaluation procedures of section 4.4 of Method 21 of appendix A of 40 CFR 60 shall be used.

d) The calibration procedures provided in section 4.2 of Method 21 of appendix A of 40 CFR 60 §755 shall be followed immediately before commencing a surface monitoring survey.

[40 CFR 60 §755 (d)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

5) The provisions of 40 CFR 60 §755 apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.

[40 CFR 60 §755 (e)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

6) Except as provided in 40 CFR 60 §752(b)(2)(i)(B), the Permittee of an MSW landfill subject to the provisions of 40 CFR 60 §752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report for which triggered 40 CFR 60 §752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

[40 CFR 60 §758(a)]
[Maricopa County Rule 360 §301.74]
[Maricopa County Rule 321 §301 (locally enforceable only)]

7) Except as provided in 40 CFR 60 §752(b)(2)(i)(B), the Permittee of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in paragraphs (b)(1) through (b)(4) of 40 CFR 60 §758 as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.

a) Where the Permittee is subject to the provisions of 40 CFR 60 §758 seeks to demonstrate compliance with 40 CFR 60 §752(b)(2)(ii):
   (1) The maximum expected gas generation flow rate as calculated in 40 CFR 60 §755(a)(1). The Permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Administrator and Control Officer.
   (2) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 60 §759(a)(1).

b) Where the Permittee is subject to the provisions of 40 CFR 60 §758 seeks to demonstrate compliance with 40 CFR 60 §752(b)(2)(iii) through the use of the existing open flare, the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60 §18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare is absent.

[40 CFR 60 §758 (b)(1) and (4)]

8) Except as provided in 40 CFR 60 §752(b)(2)(i)(B), the Permittee shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in 40 CFR 60 §756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

[40 CFR 60 §758(c)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

a) The Permittee subject to the provisions of 40 CFR 60 §758 shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections or car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR 60 §756.

[40 CFR 60 §758(c)(2)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

b) The Permittee seeking to comply with the provisions of 40 CFR 60 §758 by use of the existing open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 40 CFR 60 §756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

[40 CFR 60 §758(c)(4)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

9) Except as provided in 40 CFR 60 §752(b)(2)(i)(B), the Permittee subject to the provisions of 40 CFR 60 §758 shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

a) The Permittee subject to the provisions of 40 CFR 60 §758 shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under 40 CFR 60 §755(b).

b) The Permittee subject to the provisions of 40 CFR 60 §758 shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in 40 CFR 60 §759(a)(3)(i), as well as any non-productive areas excluded from collection as provided in 40 CFR 60 §759(a)(3)(ii).

[40 CFR 60 §758(d)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

10) Except as provided in 40 CFR 60 §752(b)(2)(i)(B), the Permittee subject to the provisions of 40 CFR 60 §§ 750 through 759 shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 40 CFR 60 §753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

[40 CFR 60 §758(e)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

C. Monitoring and Recordkeeping for the Open Flare

[40 CFR 60 §§18(d), (f)][County Rule 360 §301.1]

1) The Permittee shall monitor the flares to ensure that they are maintained and operated in conformance with their designs.
2) The Permittee shall observe visible emissions from the open flare using Method 22 of Appendix A. The observation period is 2 hours and shall be used according to Method 22.
3) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
4) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^{n} C_i H_I$$

Where:

H_T = Net heating value of the sample, MJ/scm; where the net entalpy per mole of offgas is based on combustion at 25˚C and 760 mm Hg, but the standard temperture for determining the volume corresponding to one mole is 20˚C;

Ci = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994) (Incorporated by referecne as specified in §60.17);

Hi = Net heat combustion of sample component i, kcal/g mole at 25˚C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in §60.17) if published values are not available or cannot be calculated;

K = Constant 1.740 x 10^{-7} (l/ppm)(g-mole/scm)(MJ/kcal) where standard temperature for (g-mole/scm) is 20˚C.

5) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

6) The maximum permitted velocity, V_{max} , for nonassisted flares complying with 40 CFR 60 §18.(c)(4)(iii) shall be determined by the following equation:

$$\text{Log}_{10}(V_{max}) = (H_T + 28.8) / 31.7$$

V_{max} = Maximum permitted velocity, M/sec
28.8 = Constant
31.7 = Constant
H_T = The net heating value as determined in subsection 3)

D. Monitoring and Recordkeeping for Visible Emissions

1) The Permittee shall weekly conduct a facility walk-through and observe visible emissions from the flare, power-generating internal combustion engines and microturbine.
The Permittee shall log the visual observations, including the date and time when that reading was taken, whether or not visible emissions were present, name of the person who took the reading and any other related information.
[County Rules 300 §301, 210 §302.1(c)(1)][SIP Rule 30]

2) If visible emissions are observed from the flare, power-generating internal combustion engines or the microturbine, to the ambient air, and the facility has not had a compliance status notification or notice of violation of an opacity standard in the 12 months preceding the visual observation, the Permittee shall obtain an opacity reading conducted in accordance with EPA Reference Method 9 by a certified visible emissions (VE) reader. While the emitting equipment is in operation this reading shall be taken within 3 days of the visual observance and taken daily thereafter for the next 13 days that the emitting equipment is operated. The Method 9 readings shall be taken with the emitting equipment in operation. After the daily Method 9 readings for 14 days of operation have been obtained, the Pemittee shall perform weekly Method 9 readings during each week that the emitting equipment is in operation until there are no visible emissions.
If no operation occurs on the day that the initial Method 9 reading is required to be taken, then the initial Method 9 reading shall be taken the next day that the emitting equipment is in operation. If the problem causing the visible emissions is corrected before the initial Method 9 reading is required, and no emissions are visible with the emitting equipment in operation, the Permittee shall not be required to conduct the reading. If the Permittee has had a compliance status notification or notice of violation of an opacity standard in the previous 12 calendar months a Method 9 by a certified visible emission reader must be taken within 1day of the visual observance and daily

until no visible emissions are observed. The Permittee shall log all visual observations including the following:

a) The date and time that a visible observation or Method 9 reading was taken;
b) The name of the person who took the reading;
c) Whether or not visible emissions were present;
d) The opacity of visual emissions determined by a Method 9 reading, if applicable;
e) A description of any corrective actions taken, including date, if applicable; and
f) Any other related information.

[County Rule 210 §302.1(c)(1)] [SIP Rule 31]

3) Opacity Readings
Opacity shall be determined by observations of visible emissions conducted in accordance with 40 CFR Part 60 Appendix A, Method 9.

[40 CFR 60.11.b][County Rule 300 §§501]

4) Opacity of visible emissions from intermittent sources as defined by County Rule 300§201 shall be determined by observations conducted in accordance with 40 CFR Part 60 Appendix A, Method 9, except that at least 12 rather than 24 consecutive readings shall be required at 15-second intervals for the averaging time.

[County Rule 300 §502] [locally enforceable only]

E. Monitoring and Recordkeeping for Dust Generating Activities

1) The Permittee shall keep a daily written log recording the actual application or implementation of the control measures delineated in the approved Dust Control Plan. The log or the records and supporting documentation shall be made available to the Control Officer within 48 hours, excluding weekends, from written or verbal request. If the Control Officer is at the site where requested records are kept, records shall be provided without delay.

[County Rule 310 §502] [SIP Rule 310 §502]

2) Copies of approved Dust Control Plans, control measures implementation records, and all supporting documentation shall be retained at least five years from the date such records are established.

[County Rule 310 §503] [SIP Rule 310 §503]

3) The following test methods shall be used as appropriate:

a) Dust Generating Operations: Opacity observations of a source engaging in dust generating operations shall be conducted in accordance with County Rules Appendix C, Section 3 (Visual Determination Of Opacity Of Emissions From Sources For Time-Averaged Regulations) of County Rule 310, except opacity observations for intermittent sources shall require 12 rather than 24 consecutive readings at 15-second intervals for the averaging time.

b) Unpaved parking lot: Opacity Observations of any unpaved parking lot shall be conducted in accordance with Appendix C, Section 2.1 of the Maricopa County Rules.

c) Unpaved Haul/Access Road: Opacity observations of any unpaved haul/access road (whether at a work site that is under construction or at a work site that is temporarily or permanently inactive) shall be conducted in accordance with Appendix C, Section 2.1 (Test methods for Stabilization-for unpaved Roads and Unpaved Parking Lots of the County Rules.

[County Rule 310 §501.1, Appendix C]
[SIP Rule 310 §501.1, Appendix C]

d) Unpaved parking lot: Stabilization observations for unpaved parking lots shall be conducted in accordance with Appendix C, Section 2.1 (Test Methods for Stabilization-For Unpaved Roads and Unpaved Parking Lots) of the Maricopa County Rules. When more than 1 test method is permitted for a determination, an exceedance of the limits established in Maricopa County Rule 310 determined by any of the applicable test methods constitutes a violation of Rule 310.

e) Unpaved Haul/Access Road: Stabilization observations for unpaved haul/access roads (whether at a work site that is under construction or at a work site that is temporarily or permanently inactive) shall be conducted in accordance with Appendix C, Section 2.1 (Test methods for Stabilization-for unpaved Roads and Unpaved Parking Lots of the County Rules. When more than 1 test method is permitted for a determination, an exceedance of the limits, established in Rule 310, determined by any of the applicable test methods constitutes a violation of the County Rules.

f) Open Area and Vacant Lot or Disturbed Surface Area: Stabilization observations for an open area and vacant lot or any disturbed surface area on which no activity is occurring (whether at a work site that is under construction or at a work site that is temporarily or permanently inactive) shall be conducted in accordance with at least one of the techniques described in Rule 310 §501.2c.(1) through (7), as applicable. The Permittee shall be considered in violation of Rule 210 if such inactive disturbed surface area is not maintained in a manner that meets at least 1 of the standards described in subsection 302.3 of Rule 210, as applicable.

[County Rule 310 §501.2, Appendix C]
[SIP Rule 310 §501.2, Appendix C]

F. Odor Log [County Rule 210 §302.1.c.(2)] [locally enforceable only][County Rule 320 §302]
The Permittee shall maintain a log of complaints of odors detected off-site. The log shall contain a description of the complaint, date and time that the complaint was received, and if given, name and/or phone number of the complainant. The logbook shall describe what actions were performed to investigate the complaint, the results of the investigation, and any corrective actions that were taken.

G. Monitoring and Recordkeeping of Solvents

[County Rule 331 §501] [SIP Rule 331 §501]

1) The Permittee shall maintain a current list of cleaning-solvents; state the VOC-content of each in pounds VOC per gallon of material or grams per liter of material.
2) If the Permittee uses any cleaning-solvent subject to the vapor-pressure limits of County Rule 331 §304.1 shall have on site the written value of the total VOC vapor-pressure of each such solvent by November 1, 1999, in one of the following forms:
   a) A manufacturer's technical data sheet,
   b) A manufacturer's safety data sheet (MSDS), or
   c) Actual test results.
3) The Permittee shall record the amount of cleaning-solvent used at the end of each month for the previous month. Show the type and amount of each make-up and all other cleaning-solvent.

4) Annually the Permittee shall document the use of concentrate that is used only in the formulation of Low VOC Cleaner.

5) Annually the Permittee may, for purposes of recording usage, give cleaning-solvents of similar VOC content a single group-name, distinct from any product names in the group. The total usage of all products in that group are then recorded under just one name. (In such case the Permittee shall also keep a separate list that identifies the product names of the particular solvents included under the group name.) To the group name shall be assigned the highest VOC content among the members of that group, rounded to the nearest 10^{th} of a pound of VOC per gallon of material, or to the nearest gram VOC per liter of material.

H. Monitoring and Recordkeeping for the Gasoline Storage Tank

[County Rule 210 §302.1c.(2)][County Rule 353 §502][SIP Rule 353 §502]

1) The Permittee shall record by the end of the following month, the total amount of gasoline received each month.

2) The Permittee shall cause weekly records of fill tube, vapor valve and spill containment inspection to be kept as well as records of any corrective actions and their dates. The finding of such weekly inspections shall be permanently entered in a record or logbook by the end of Saturday of the following week.

3) These records and any reports or supporting information required by these permit conditions or by the Control Officer shall be retained for at least 5 years.

4) The Permittee shall maintain records of the past 12 months in a readily accessible location and must be made available to the Control Officer without delay upon verbal or written request.

I. Monitoring and Recordkeeping for the StormWater Pump

[County Rule 210 §302.1c(2)]

1) If proof of the sulfur content is requested by the Control Officer, the Permittee shall submit fuel receipts, contract specifications, pipeline meter tickets or Material Safety Data Sheets (MSDS), if applicable, from the fuel supplier indicating the sulfur content of the fuel oil. In lieu of these, testing of the fuel oil for sulfur content to meet the 0.05% limit shall be permitted if so desired by the Permittee for evidence of compliance.

2) The Permittee shall keep an annual engine record that includes the hours of operation.

J. Monitoring and Recordkeeping for the Power Generating Engines/Microturbines

[County Rule 210 §302.1c(2)]

1) The Permittee shall keep a record that includes an initial one time entry that lists the particular engine combustion type (compression or spark-ignition); manufacturer and serial number; model designation, rated brake horsepower, and where the engine is located on the site.

2) The Permittee shall maintain a monthly record of the hours of operation of the engines.

K. Monitoring and Recordkeeping for Asbestos Disposal

[40 CFR §61.154][County Rule 370 §301.8]

1) For all asbestos-containing waste material received, the Permittee shall:
   a) Maintain waste shipment records, using a form similar to that shown in Figure 4 of 40 CFR §61.154, and include the following information:
      (1) The name, address, and telephone number of the waste generator.
      (2) The name, address, and telephone number of the transporter(s).
      (3) The quantity of the asbestos-containing waste material in cubic meters (cubic yards).
      (4) The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, State or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report.
      (5) The date of the receipt.
   b) As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator.
   c) Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.
   d) Retain a copy of all records and reports required by this section for at least 2 years.
2) Maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.
3) Upon closure, comply with the provisions of 40 CFR §61.151.
4) Submit to the Department, upon closure of the facility, a copy of the records of asbestos waste disposal locations and quantities.
5) Furnish upon request, and make available during normal business hours for inspection by the Department, all records required under 40 CFR §61.154.
6) Notify the USEPA and the Department, Attn: Asbestos Coordinator, in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Department at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:
   a) Scheduled starting and completion dates.
   b) Reason for disturbing the waste.
   c) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Department may require changes in the emission control procedures to be used.

d) Location of any temporary storage site and the final disposal site.

L. Monitoring and Recordkeeping for Petroleum Contaminated Soils

The Permittee shall keep records for each load of petroleum-contaminated soil received for disposal at this landfill. These records shall contain, but shall not be limited to, the following information:

1) The date on which the contaminated soil is delivered to the landfill.
2) The manifest number.
3) Name and address of company providing transport.
4) Original ownership of the contaminated soil.
5) Specific address of origin of the contaminated soil (Post Office Box numbers are unnaceptable).
6) Volume of contaminated soil being delivered and total volume of contaminated soil at the point of origin which will be delivered to the landfill.
7) Results of tests conducted to determine petroleum product concentrations.

[County Rule 210 §302.1.c.(2)] [locally enforceable only][Rule 320 §304]

M. Monitoring and Recordkeeping for Liquid Waste Stabilization

1) The Permittee shall maintain the waste generator certification of VOC content for each liquid waste stream accepted for treatment as required under USEPA Resource Conservation and Recovery Act (RCRA) standards as specified in 40 CFR 258. The records will be kept on a monthly basis and will include the quantity of material and date received, the VOC concentration in ppmw, the waste management profile number and a summary of the solidification method used for the material received. Any analytical laboratory test results used to verify the VOC concentrations of the waste streams will also be retained.
2) The VOC concentration in the waste stream shall be calculated by adding the concentration of all VOCs in the sample that both show up at a concentration above the lower detection limit in the appropriate test method specified by RCRA, and have a true vapor pressure of 1.5 pounds per square inch (psi) or greater for the pure compound at ambient temperature.

[County Rule 210 §302.1.c.(2)] [locally enforceable only][Rule 320 §304]

21. REPORTING REQUIREMENTS

**NOTE: Additional reporting requirements are found in the general conditions of this permit.*

A. Landfill Closure:

The Permittee of a controlled landfill shall submit a closure report to the Administrator and Control Officer within 30 days of waste acceptance cessation. The Administrator and Control Officer may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258 §60. If a closure report has been submitted to the Administrator and Control Officer, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4).

[40 CFR 60 §757(d) and 40 CFR 60 §752(b)(ii)(B)]
[Maricopa County Rule 360 §301.74]
[Maricopa County Rule 321 §301 (locally enforceable only)]

B. Equipment Removal:

The Permittee of a controlled landfill shall submit an equipment removal report to the Administrator and Control Officer 30 days prior to removal or cessation of operation of the control equipment.

1) The equipment removal report shall contain all the following items:
   a) A copy of the closure report submitted in accordance with paragraph (d) of 40 CFR 60 §757;
   b) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and
   c) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year.
2) The Administrator and Control Officer may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 60 §752(b)(2)(v) have been met.

[40 CFR 60 §757(e)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

C. Semi-annual Report:

The Permittee shall file semiannual monitoring reports with the Control Officer, Attn: Large Source Compliance Supervisor. The initial reporting period shall begin on the permit issuance date and shall cover a period of 6 months or less. The second and subsequent reporting periods shall be in 6 month intervals after the end of the initial reporting period. The semiannual monitoring reports shall be filed by the end of the month following the reporting period. Each report shall cover all instances of deviations from these permit conditions during the reporting period, the cause of the deviations if any were present, and any applicable corrective actions taken. The monitoring report shall also contain the following information at a minimum:

1) Visible emission observations from the flare, power-generating engines and microturbine:
   a) Dates on which visible emissions observations were taken;
   b) Name of the observer;
   c) Whether or not visible emissions were present;
   d) The opacity of visual emissions determined by a Method 9 reading, if applicable;
   e) A description of any corrective actions taken, including date taken, if applicable; and

f) Any other related information.

[County Rule 210 §302.1 e (1)][SIP Rule 30]

2) Odors:
The Permittee shall include a copy of the portion of the odor log, which covers the applicable 6 month reporting period in each of the semiannual compliance reports. If no complaints were received during the reporting period, a statement to that effect may be substituted for the copy of the odor log.

[County Rule 210 §302.1.e.(1)][locally enforceable only][County Rule 320 §300]

3) Solvent Usage
The Permittee shall include in each semiannual compliance report a certification that monthly and annual recordkeeping was performed as directed in the monitoring/recordkeeping requirements above. If such certification can not be provided, the Permittee shall identify the reasons and shall instead submit a statement detailing any corrective actions taken.

[County Rule 210 §302.1.e.(1)][locally enforceable only][County Rule 331]

4) Gasoline Storage Tanks
The Permittee shall include the following in each Semi-annual compliance report a certification that the gasoline throughput limit of this permit was not exceeded. If such certification can not be provided, the Permittee shall identify the reasons and shall instead submit a statement detailing any corrective actions taken.

[County Rule 210 §302.1.e.(1)][locally enforceable only][County Rule 353]

5) StormWater Pump
The Permittee shall include in the each semiannual report the hours of operation for the StormWater Pump Engine.

[County Rule 210 §302.1.e.(1)][locally enforceable only]

6) Petroleum Contaminated Soils
The Permittee shall include in the semiannual report a summary of the amount, concentration and dates that petroleum contaminated soils were received at the landfill in the 6 months covered by the report.

[County Rule 210 §302.1.e.(1)][locally enforceable only]

7) Liquid Waste
The Permittee shall include in the semiannual report a summary of the amount of liquid waste received at the facility each month of the reporting period in gallons, and a rolling 12 month total of the liquid waste accepted for the past 12 consecutive months.
The Permittee shall also indicate in the summary the VOC concentration of any liquid waste with a VOC content greater than 40 ppmw, and the dates the waste was received. If no liquid waste was received with VOC content greater than 40 ppmw, the Permittee shall submit a statement to that effect.

[County Rule 210 §302.1.e.(1)][locally enforceable only]

8) Asbestos

The Permittee shall include in each semiannual report the quantity of asbestos-containing waste received in the reporting period and the dates received.

[County Rule 210 §302.1 e. (1)][locally enforceable only]

D. NMOC Report:

Except as provided in 40 CFR 60 §752(b)(2)(i)(B), the Permittee subject to the requirements of this 40 CFR 60 §757(b) shall submit an NMOC emission rate report to the Administrator and Control Officer initially and annually thereafter, except as provided for in paragraphs (b)(1)(ii) or (b)(3) of 40 CFR 60 §757(b). The Administrator and Control Officer may request such additional information as may be necessary to verify the reported NMOC emission rate.

[40 CFR 60 §757(b)]
[Maricopa County Rule 360 §301.74]
[Maricopa County Rule 321 §301 (locally enforceable only)]

E. Reporting Requirements for the Environmental Protection Agency Administrator.

The Permittee of a landfill seeking to comply with 40 CFR 60 §752(b)(2) using an active collection system designed in accordance with 40 CFR 60 §752(b)(2)(ii) shall submit to the EPA Administrator **an annual report**. The annual report shall include the following recorded information. For enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR 60 §758(c).

1) Value and length of time for exceedance of applicable parameters monitored under 40 CFR 60 §756(a), and (b).
2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under 40 CFR 60 §756.
3) Description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating.
4) All periods when the collection system was not operating in excess of 5 days.
5) The location of each exceedance of the 500 part per million methane concentration as provided in 40 CFR 60 §753(d) and the concentration as provided in 40 CFR 60 §753(d) and the concentrations recorded at each location for which an exceedance was recorded in the previous month.
6) The date of installation and the location of each well or collection system expansion added pursuant to paragraphs (a)(3), (b), and (c)(4) of 40 CFR 60 §755.

[40 CFR 60 §757(f)][County Rule 360 §301.74]
[County Rule 321 §301 (locally enforceable only)]

F. Performance Test Report

The Permitee shall include the following information with the initial performance test report required under 40 CFR 60.8:

1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;
2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;

3) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;
4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on non-productivity and the calculations of gas generation flow rate for each excluded area; and
5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and
6) The provisions for the control of off-site migration.

[40 CFR 60 §757(g)][County Rule 360 §301.74]
[County Rules 200 §309 and 321 §301 (locally enforceable only)]
[County Rule 210 §302.1.e.(1)]

G. Asbestos Reporting

The Permittee shall provide the following information to the USEPA and the Department, Attn: Asbestos Coordinator, within 90 days of the effective date of 40 CFR §61.153 unless the Permittee has previously provided this information to the Department. Any changes to the information provided by any existing source shall be provided to the Department, postmarked or delivered, within 30 days of the change:

1) A brief description of the site; and
2) The method or methods used to comply with the standard, or alternative procedures to be used.

The information required in this permit condition must accompany the information required by 40 CFR §61.10.

[40 CFR §61.153][County Rule 370 §301.8]

22. TESTING REQUIREMENTS

**NOTE: All test protocols, notifications and reports required by this permit condition should be addressed to the attention of the Compliance Test Supervisor.*

A. Performance Testing

The Permittee shall conduct performance testing as follows:

1) The Permittee shall conduct an emissions test on the power generating internal combustion (IC) engines and microturbine within 60 days after such equipment has achieved capability to operate at its maximum production rate on a sustained basis but no later than 180 days after their initial start-up . The testing shall be used to determine compliance with the nonmethane organic compounds (NMOC) destruction efficiency as well as for the NOx and CO emission rates.

The above time frames may be extended by the Control Officer for good cause, but in no case shall the testing period extend for more than 180 days after the initial start-up of the engines or microturbine

[County Rule 200 §309][40 CFR §60.752(b)(2)(iii)(B)][County Rule 270][SIP Rule 27]

2) NMOC Destruction: Testing shall be performed in accordance with test Methods 25, 25C or 18 of 40 CFR Part 60 Appendix A unless other method to demonstrate compliance has been approved by the EPA Administrator and the County Control Officer as provided by 40 CFr 60 §(b)(2)(i)(B). Method 3 or 3A shall be used to determine oxygen for correcting the NMOC concentration as hexane to 3 percent. In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), Method 25C should be used in place of Method 25. If using Method 18 of appendix A of this part, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency} = \left\{ \frac{(\text{NMOC}_{in} - \text{NMOC}_{out})}{\text{NMOC}_{in}} \right\}$$

where,
$NMOC_{in}$ = mass of NMOC entering control device
$NMOC_{out}$ = mass of NMOC exiting control device

CO and NOx Emission Rates: Method 7E must be used to determine the NOx emission rate and Method 10 must be used to determine the CO emission rate, unless alternative methods are established.

[County Rules 200 §309 and 360 §301.74]
[County Rule 321 §301 (locally enforceable only]

3) Performance tests shall be conducted under such conditions as the Control Officer shall specify based upon representative performance of the source or facility. The Permittee shall make available to the Control Officer such records as may be necessary to determine the conditions of the performance tests. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions of performance tests unless otherwise specified in the applicable standard.

[County Rule 270 §403]

4) The Permittee shall provide, or cause to be provided, source testing facilities as follows:

a) Test reports adequate for the applicable test methods
b) Safe sampling platform(s)
c) Safe access to sampling platform(s)
d) Utilities for testing and sampling equipment.

[County Rule 270 §405]

5) The Permittee shall submit an approvable test protocol to the Department, for review and approval at least 30 days prior to the emission test. A fee for each stack to be tested shall be submitted with the protocol as required by County Rule 280.

[County Rule 270 §301.1][County Rule 280 §301.5]

6) The Permittee shall notify the Department in writing at least two weeks in advance of the actual time and date of the emissions test so that the Division may have a representative attend.

[County Rule 270 §404]

7) The Permittee shall complete and submit a report to the Department within 30 days after the completion of the emissions test. The report shall summarize the results of the testing in sufficient detail to allow a compliance determination and demonstration of the appropriate ammonia Molar Ratio value to be made.

[County Rule 270 §§301.1 & 401]

APPENDIX A
LIST OF EQUIPMENT

PERMITTED EQUIPMENT:

1) Gas Collection:
   a) A landfill gas collection system removes the landfill gas under a vacuum from the perimeter of the landfill. Currently 14 vertical landfill gas wells are installed along the perimeter of the landfill and contributing gas to the flare, which is generally operated 24 hours/day, 365 days/year.

2) Gas Control:

Flare Stack	Dimensions	Maximum Allowable LFG Inlet Stream (SCFM)
LFG Specialties Candlestick flare	Height = 23ft Diameter = 10ft	1620

3) Alternate Scenario Equipment:

AOS#1

2 - 1,410 hp (1,019 kw) internal combustion (IC) engines that use LFG to generate electricity.

AOS#2

70 Kw microturbine that uses LFG to generate electricity.

4) 22,000 gallon diesel fuel storage tank
5) 500 gallon gasoline fuel storage tank
6) 140 hp stormwater pump
7) Safety Kleen Parts Washer

Technical Support Document (TSD)
Butterfield Station
Permit Number: V98-003
Includes Minor Modification 1-17-03-01
August 19, 2003

1. GENERAL FACILITY OVERVIEW

The Butterfield Station Facility (BSF) consists of approximately 447 acres of land. The landfill opened in 1990 and it has an estimated disposal capacity of 77 million cubic yards.

Wastes acceptable for landfilling at BSF are:

- Municipal refuse, and other wastes from households or commercial facilities;
- Construction debris;
- Demolition material;
- Dead animals;
- Non-friable and friable asbestos-containing materials;
- Shredder residue;
- Incinerator ash;
- Treated medical wastes;
- Water and wastewater treatment sludges which pass the paint filter test;
- White goods without chorofluorocarbons (CFCs);
    - Wastes acceptable for solidification, including non-hazardous industrial process liquids, rainwater, septic, etc.
- Non-hazardous industrial waste, and;
- Other non-hazardous special wastes (ie. Petroleum contaminated soils and autoshredder fluff).

The estimated total life expectancy of the landfill (excluding post-closure) is through the year 2021.

BSF is classified by New Source Performance Standards as a categorical source and is subject to NSPS and Title V regulatory requirements.

BSF has installed an active collection and control system for Non-Methane Organic Compounds (NMOCs). The source submitted a design plan for the collection and control system and the plan was approved by MCESD and installed in 1999.

Company Information:

Facility Name:	Butterfield Station
Mailing Address:	40404 South 99th Avenue Mobile, AZ 85239
Facility Address:	40404 South 99th Avenue Mobile, AZ 85239

2. EMISSION UNIT/PROCESS DESCRIPTION:

A. Dust Generating Activities:

Excavated soils are used for daily and intermediate cover, and construction of perimeter berms, final cover, roadways, and dikes. Solid wastes are disposed of by spreading in thin layers and compacted to the smallest practical volume. Compacted waste is covered each day with soil or approved alternate daily cover. This process generates fugitive dust emissions. Also, traffic on paved/unpaved roads generates fugitive emissions.

B. Gas Collection and Control:

An active landfill gas collection system working under vacuum removes the landfill gas from the landfill mass and the surrounding soil formation. There is one candlestick flare on site. As an alternative scenario (AOS#1), the source will install 2 internal combustion engines that will use the captured landfill gas to produce electricity which will either be sold or used on site. As a second alternative scenario (AOS#2), the source will install a microturbine which will use the captured landfill gas to produce electricity. The flare, engines and microturbine generate combustion emissions.

C. Leachate Collection System:
The leachate collection system is installed over lined portions of the facility to remove the leachate. The leachate is generated by precipitation or other moisture that percolates through the refuse mass and is collected by a subsurface collection and recovery system. The leachate is collected in underground sumps, pumped into a water truck and spread over the refuse mass in lined disposal cells for dust control, or may drain into an evaporation pond. The collection, storage and evaporation of the leachate generates VOCs and HAPs.

D. Storage tanks
There is a 500 gallon tank of gasoline at this facility. It generates VOCs and HAPs.

E. Internal Combustion
There is one portable water pump engine at this facility (140 hp) which generates combustion emissions. This piece of equipment is considered a nonroad engine, since it is moved around the source.

F. Asbestos-Containing Waste
Asbestos waste is delivered and disposed at the landfill. No emissions of asbestos are anticipated to occur due to compliance with the handling and disposal protocols and requirements.

G. Liquid Waste Stabilization
This process involves unloading liquid waste into open top bins, or the application of liquids to soil in designated solidification areas of future cell excavation areas in accordance with the site permit's requirements. The liquids are mixed with soil for solidification purposes. The process may also involve unloading liquids into a designated evaporation pond for drying. VOCs may be emitted from the mixture solidification process.

H. Petroleum Contaminated Soils
PCS are received at the landfill, and they generate VOCs and HAPs emissions.

3. APPLICABLE REQUIREMENTS

A. Rule 241 - RACT (**Permit Conditions 18.A and B.**)

1) Discussion: BSF has listed 2 alternative scenarios in their permit application. AOS#1 would involve installing 2- 1410 hp IC engines to convert the landfill gas into electricity. AOS#2 would involve installing a 70 Kw microturbine to convert the landfill gas into electricity. Reasonably Available Control Technology (RACT), as defined in Rule 241 of the Maricopa County Rules has been determined for the engines and microturbine to be:

Engines : NOx - 0.6 g/bhp-hr (4500 ppm)
CO - 2.5 g/bhp-hr (280 ppm)
Microturbines: NOx - 25 ppm @ 15% O_2
CO - 200 ppm @ 15% O_2

Rule 360 (40 CFR 60 Subpart GG) is not applicable to the microturbines at this facility since that rule is only applicable to turbines with more than 10 MMBtu/hr heat input.

2) Event though manufacturer's specifications for both the engines and the microturbine show their emissions to be at or RACT levels, to demonstrate compliance, the Permittee

shall conduct performance tests on the engines, or microturbine, whichever is installed **(Permit Condition 22**).

B. Limits for gasoline storage tank (**Permit Condition 18.C**)

1) Discussion

The monthly and annual VOC emission limit of Permit V98-003 remains the same as previously permitted (9101488 Minor Modification 10-21-98-01) for the facility.

2) Monitoring for Compliance

Gasoline tank: To ensure compliance with the VOC limits, there are several operational requirements for the tank that the source must follow **(Permit Condition 19.D.)**. County Rule 353 establishes these requirements. Gasoline tanks that receive less than 12,000 gallons per year are exempt from additional vapor recovery provisions that are listed in the rule. The sections of the rule that this source is not exempt from, require that the tank's integrity prevent any vapor or liquid escape, that the fittings and spill containment system be vapor tight. The source also has requirements regarding the spill containment system and the fill pipe.

The Permittee is required to monitor for compliance with these permit conditions by keeping records of the amount of gasoline received each month, records of inspections of the fill tube, vapor valve and spill containment, and records of any corrective actions (**Permit Condition 20.H**).

C. County Rule 300 - Opacity Limits **(Permit Condition 18.D)**

1) Discussion

County Rule 300 restricts visible emissions from any source to 20% opacity, other than emissions of uncombined water. County Rule 300 and the 20% opacity limitation of these permit conditions are locally enforceable only. SIP Rule 30 and the 40% opacity limitation of these permit conditions are federally enforceable.

2) Monitoring for Compliance with Opacity Limits

The Permittee will monitor for compliance with the opacity requirements of this permit by performing a weekly walk around the facility, looking for visible emissions from the flares, power-generating engines and microturbine(**Permit Condition 20.D.1)**).

If emissions are observed, and the Permittee has not had an opacity violation in the 12 months preceding the observation, then the Permittee is required to obtain EPA Method 9 daily readings within 72 hours and daily for the next 13 days, and weekly thereafter until no visible emissions are observed. However, if the Permittee takes corrective action and the visible emissions are eliminated before the end of the third day, or if the visible emissions don't persist, the Method 9 reading will not be required. The Permittee is required to document any corrective action taken to reduce or eliminate emissions. If the Permittee has had an occurrence of visible emissions with an opacity of greater than 20% at any time in the 12 month period preceding the observation, then a certified Method 9 reading is required within 24 hours of observation and daily thereafter until no visible emissions are observed (**Permit Condition 20.D.2)**).

A certified Method 9 reading of greater than 20% opacity at any time constitutes a violation of the opacity limitations of this Permit, regardless of whether visible emissions have persisted for three subsequent days.

D. County Rules 310 and 310.01 - Fugitive Dust Sources **(Permit Condition 18.E)**

1) Discussion

County Rule 310 restricts visible fugitive dust emissions to 20% opacity. It also provides the source with an affirmative defense if there is a violation of the opacity limit due to a wind event.

2) Monitoring for Compliance with Dust Control Plan

The permittee has submitted a dust control plan showing how they will comply with the requirements of Rule 310 (From earthmoving permit E2011433). BSF is required to implement various control measures and work practices to restrict dust emissions from different areas of the landfill. The control measures restrict visible emissions to 20 percent opacity and establish stabilization requirements for dust generating operations.

Work practices and control measures that restrict fugitive dust emissions are described for the activities listed below (**Permit Condition 19.C**). Test methods to be used for determining compliance are also described in the permit (**Permit Condition 20.E**).

a) Open areas and vacant lots
b) Bulk Material hauling/Transporting **Off-Site** Onto Paved Public Roadways
c) Bulk Material Hauling/Transporting **On-Site** Within the Boundaries of the Work Site
d) When **On-Site** Hauling/Transporting within the Boundaries of the Work Site but **Not Crossing A Public Roadway** upon Which the Public Is Allowed To Travel
e) Bulk Material Handling Operations and Open Storage Piles
f) Spillage, Carry-Out, Erosion, and/or Trackout
g) Earthmoving Operations on Disturbed Surface Areas 1 Acre or Larger
h) Easements, Rights-of-Way, and Access Roads for Utilities
i) Unpaved haul/access roads
j) Vehicle Use in Open Areas and Vacant Lots

E. SIP Rule 32 - SOx Emission Limits **(Permit Condition 18.F)**

1) Discussion

SIP Rule 32 limits the source's SOx emissions. This SIP Rule is based on an old Maricopa County rule. The limits are restricting only for large combustion sources. SOx emissions from burning landfill gas only from one flare are very low.

2) Monitoring for Compliance with SOx limits

A screen model was run for BSF to determine if they exceeded the emission concentration for Sulfur Dioxide (SO_x) in SIP Rule 32 (see table 1)

Table 1: SO_x Emission Limits from SIP Rule 32

Concentration of SO_x	Averaging Time
850µg/m^3	1 hour
250µg/m^3	24 hour
120µg/m^3	72 hour

The results of the SCREEN3 Air Emissions model performed for BSF are listed below. The following information was provided to the source to ensure they would be able to determine compliance. It is important to know that SCREEN3 is not specific to chemical/pollutant species and can be used for any pollutant coming out of the stack modeled.

The maximum 1-hour concentration of sulfur oxides predicted was 33.38 micrograms/cubic meter at a distance of 40 meters from the flare station.

The simple terrain inputs used in the SCREEN3 model for SO_x are listed below.
Simple terrain inputs:

1) A point source type was used assuming emissions would be generated from a flare and either engines or microturbine.
2) The emission rate used was 0.16 grams/second. The emission rate was calculated based on the following:
   a) 1.30 lb/hr of emissions, calculated as the maximum hourly emission rate regardless of the operating scenario.
   b) Operation of the flare was assumed to be 365 days/year, 24 hours per day.
3) Stack height = 7.01 m (23 ft) (flare stack height from Title V permit application).
4) Stack exit diameter = 0.2 m (0.67 ft)
5) Exit Velocity = 121 fps = 36.9 m/sec
6) Exit T = 650F = 617K
7) The urban model was used presuming a more conservative estimate since potential impacts are so far below threshold limits.

Given that the concentration of SOx from this facility is much lower than the limit established in SIP Rule 32, and that exceedance of that such limit would be impossible without revising the permit to add more equipment, the Permittee is not required to do any further monitoring of SOx.

F. County Rule 320 - Hydrogen Sulfide **(Permit Condition 18.G)**

1) Discussion
Rule 320 restricts emission concentrations of H_2S beyond the facility's fenceline to 0.03 ppmv.

2) Monitoring for Compliance with Hydrogen Sulfide
BSF has to maintain a log of odor complaints on site (**Permit Condition 20.F**). Hydrogen sulfide does not have to be monitored on a regular basis since the gas collection and control system ensure that gas is being collected and removed, but additional monitoring or testing may be required by the Control Officer (**Permit Condition 20.A**).

G. 40 CFR 60 Subpart WWW Standards of Performance for Municipal Solid Waste Landfills - **(Permit Condition 19.A)**

The permit conditions discussed below are taken directly out of the NSPS Subpart WWW. This landfill has exceeded the 50 Mg/yr non-methane compound (NMOC) surface emission threshold based on the Tier II described in 40 CFR 60.754(a)(3)and installed a collection and control system. The permit conditions listed below discuss operational requirements for such collection and control system.

1) Collection System Design Requirements- **Permit Conditions 19.A.1)**
   a) Discussion: These permit conditions list the requirements that the active collection system must meet at the facility. An active collection system is one that uses gas mover equipment (fan, blower, compressor…).
   b) Monitoring for Compliance: BSF's collection system has been in place since 1999, and in compliance with these sections. The permittee shall keep for the life of the collection system an up-to-date plot map showing existing and planned collectors with location labels (**Permit Condition 20.B.9)**).

2) Control System Design Requirements- **Permit Condition 19.A.2)**.

a) Discussion: This permit condition establishes the design requirements for controlling gas emissions from the landfill. The control system must either be one that reduces Non Methane Organic Compounds (NMOC) by 98% or reduce the outlet NMOC concentration to less than 20 ppmv, dry basis as hexane at 3% O_2, or a system that collects the gas and treats it for sale or use. Emissions from the treatment system must also be controlled in one of the two ways described. The control device used must be operated within the parameter ranges established during the most recent performance test.

b) Monitoring for Compliance: BSF controls landfill gas by way of an open flare and as alternative scenarios the source may install 2 internal combustion engines or a microturbine. In order to ensure the equipment is meeting the required removal efficiency or outlet concentration, compliance performance testing requirements are included in this Permit (**Permit Condition 22**). No performance testing will be conducted on the flare. Additional operational and monitoring requirements for open flares are listed in other sections of the permit, as required by 40 CFR 60.18. To monitor additional parameters of the open flare, the permittee shall install heat sensing and flow recording devices (**Permit Condition 19.A.11)**) and shall keep records of the flow and of the flame or flare pilot flame monitoring (**Permit Condition 20.B.8)**). The collection/control system at this facility is already equipped with a valve that closes flow to the flare automatically under low temperature conditions.
Records of the performance testing and monitoring parameters shall be maintained (**Permit Condition 20.B.7) and 8)**).

3) Collection/Control System Removal - **Permit Condition 19.A.4)**

a) Discussion: Before a landfill's collection/control system can be removed, the source must demonstrate the landfill is closed (as defined in 40 CFR 60.751), that the collection/control system has been in operation at least for 15 years, and that NMOC emissions are less than 50 Mg/yr as measured in 3 consecutive dates, no less than 90 days apart, and no more than 180 days apart.

b) Monitoring for Compliance: This is not a closed landfill as defined in 40 CFR 60.751. The landfill's collection and control system is still in operation and will be so for a number of years in the future. To determine the NMOC emissions the permittee shall use the calculations described in the Permit (**Permit Condition 20.B.1)**).

4) Collection System Operations - **Permit Condition 19.A.5)**

a) Discussion: Subsections a) through g) of this permit condition list how the collection system shall be operated. Some of the requirements are:

(1) Negative pressure at each wellhead unless there is a fire, increased temperature, there is a geomembrane or synthetic cover, or a well is decommissioned.

(2) Temperature of the gas at each wellhead less than 55˚F with either a nitrogen level less than 20 % or oxygen level less than 5%. Test methods for N_2 and O_2 content are described.

(3) Methane concentration less than 500 ppm above background at the surface.

(4) Collected gases vent to control. If such control is inoperable, the gas mover system shall be shut down and all valves shall be closed w/in one hour.

(5) Control/Treatment system has to operate at all times when the gas is being collected and routed to the system.

(6) Corrective action shall be taken if any of the subsections above are not being met.

b) Monitoring for compliance: The permittee shall use the methods described in the subsections of this permit condition to monitor the N_2 and O_2 content, and the methane concentration at the surface. Procedures for compliance with the surface methane operational standard and specifications on the instrumentation and monitoring devices are described in the Permit (**Permit Conditions 20.B.3) and 4)**). Also, for the purposes of demonstrating compliance with the design requirements of the collection system, the permittee shall install a sampling port and a thermometer or another device to be able to measure the temperature. The gauge pressure and concentrations of O2 and N2 shall be measured on a monthly basis (**Permit Condition 19.A.10)**).

5) Collection System Corrective Action - **Permit Conditions 19.A.6), and 8)**
Discussion: These permit conditions indicates procedures to take corrective action if positive pressure exists at the gas collection header or if one of the operating parameters described in 40 CFR 60.755(a)(5) is exceeded.

H. 40 CFR 60.18 - Requirements for the Flare (**Permit Condition 19.B**)

1) Discussion
40 CFR 60.18 establishes requirements for flares. Flares shall be designed and operated so they don't emit visible emissions, except for short times. A flame shall be present at all times, and the flare shall be operated with an exit velocity determined in a couple of different ways as described in the subpart.

2) Monitoring for Compliance
The flare's visible emissions shall be monitored for 2 hours using Method 22. This permit condition also describes how to calculate the heating value of the gas being combusted and the maximum permitted velocity (**Permit Condition 20.C**). Additional monitoring and recordkeeping of the flare is listed in sections of the permit according to Subpart WWW of the NSPS.

I. Requirements for the Water Pump (**Permit Condition 19.E**)

1) Discussion
This engine according to EPA's definition, is a nonroad engine, since it moves to different sites within a stationary source (40 CFR 81.1602). Even though permitting authorities may not control emissions from nonroad engines, they may impose "in use" requirements. Such requirements could include limitations on the hours of operation, sulfur limits in fuel, etc (59 Fed. Reg. 31306). This source has been limited to using this engine 1,386 hours per year, to ensure that NOx emissions are not increased. 1386 hours is the estimated maximum number of hours this piece of equipment will run in one year. The source is also limited to burning diesel with 0.05% sulfur or less.

2) Monitoring for Compliance
To monitor for compliance, the source must keep records of the sulfur content of the diesel fuel and records of hours of operation (**Permit Condition 20.I**).

J. Requirements for the Engines and Microturbines (**Permit Condition 19.F**)

The power generating engines and microturbine that will operate as alternative scenarios can only operate using landfill gas, and within the parameter ranges established during an initial performance test. Since the engines and microturbines will control the emissions of landfill gas, they also have the same requirements for NMOC efficiency removal as described in 40 CFR 60 Subpart WWW.

K. County Rule Rule 320 - VOC Containment: Requirements for Liquid Waste Stabilization and Petroleum Contaminated Soil Disposal(**Permit Condition 19.G**)

1) Discussion

The permit conditions for Liquid Waste and PCS disposal remain similar to previously permitted (9101488 and Minor Modifications 1-21-97-01 and 9-23-93-01) for the facility. These permit conditions were considered RACT when this processes were first permitted, and their goal was to ensure compliance with Rule 320's VOC containment.

a) BSF accepts liquid waste for solidification. Solidification is accomplished by mixing the liquid waste with the soil. Once solidified, the mix can be used for landfill cover if the VOC concentration of the liquid waste was 40 ppmw or less, or buried into the landfill using earthmoving equipment, if the VOC concenctration was larger than 40 ppmw. Solidification is conducted in a couple of different ways. Bulk trucks unload liquid waste into steel bins where the liquids are mixed with soil using a backhoe, or bulk tankers apply the liquid waste directly to the landfill cells where it is mixed with the soil using earthmoving equipment. The source is also limited to only processing 8.5 million gallons per month and 84 million gallons per year of liquid waste. The monthly limit was increased from previously permitted, since the limit, 7.1 million gallons, was calculated by dividing the annual limit into 12 months. This calculation was not realistic and did not allow for operational flexibility. The limit has been increased to 8.5 million gallons (a 20% increase). With the 40 ppmw concentration, this will limit their VOC emissions from this operation to 1.38 tons/month and 13.68 tons/yr, as shown in the calculations below:

VOC_{annual} = (40 lb VOC/10^6 total lb)(84 x 10^6 gallon/yr)(8.14 lb/gallon)(1 ton/2000 lb) = 13.68 tons/yr

$VOC_{monthly}$ = (40 lb VOC/10^6 total lb)(8.5 x 10^6 gallon/mo)(8.14 lb/gallon)(1 ton/2000 lb) = 1.38 tons/month

The 40 ppmw concentration was calculated by the source in 1996 as a conservative estimate for permitting purposes. The Title V application shows an average concentration of 9 ppmw.

b) The landfill was previously limited to a concentration of 50,000 ppm of total petroleum hydrocarbons (TPH). This limit was determined in agreement with a rule from the Arizona Department of Environmental Quality (ADEQ) that no longer exists. As such, the contaminated soil that comes into the site has not been tested for TPH. Previously the source was also required to test the incoming soil for TPH. Since the TPH limit has been removed, such testing is not necessary.

Petroleum contaminated soil is defined in the permit as containing more than 100 ppmw of any volatile organic material (previously "organic material"), or more than 40 ppmw BTEX (benzene, toluene, ethylbenzene and xylenes), with a vapor pressure of 1.5 psia or greater. Anything with a vapor pressure lower than 1.5 psia is not considered petroleum contaminated soil.

The 40 ppmw BTEX threshold was established to match the concentration limit for the liquid waste solidification process, and as a fraction of the previous limit of 100 ppmw total organic materials, since BTEX is a fraction of the organic materials in gasoline.

The source is not allowed to use petroleum contaminated soil for cover.

2) Monitoring for Compliance

a) In order to comply with the Liquid Waste Stabilization limits above, the source must calculate VOC concentrations and shall maintain certification of VOC contents for the liquids accepted. Monthly records and 12-month rolling totals of materials received and VOC concentrations shall be kept.(**Permit Condition 20.M**)

b) VOC emissions from disposing of petroleum contaminated soils at the landfill are estimated to be 0.01 tons per year (actual emissions). These emissions make up 0.13 % of the total actual VOC emissions from the entire facility. Also, EPA agrees that "the majority of emissions from PCS may occur during excavation, storage, and transport prior to entering the boundaries of the landfill…" (65 Federal Register 66672, 11/7/2000). BSF shall keep records of shipments of PCS including the date, manifest number, transporting company and originator of soil, volume of soil delivered and test results showing the VOC/BTEX concentration of the soil (**Permit Condition 20.L.)** No additional on-site testing of the soil will be required.

L. County Rule 320 – Facility-Wide Requirements (**Permit Condition 19.H.1) and 2)**)

1. Discussion

County Rule 320 §§300 and 303, entitled "Standards", and "Reasonable Stack Height Required", respectively, apply to this facility and have been incorporated into the permit conditions.

2. Monitoring for Compliance

To monitor for compliance with these requirements, the Permittee is required (**Permit Condition 20.F)**) to maintain an odor complaint log containing a description of the complaint, date, time and other information and submit a copy of this log with the semi-annual monitoring report.

M. 40 CFR 61 Subpart M – Asbestos Disposal Requirements (**Permit Condition 19.H.3)**)

1. Discussion

BSF accepts wastes that contain asbestos. Subpart M of the NESHAPs list requirements for facilities where such waste is accepted. This subpart describes warning signs to be posted, procedures for covering the waste, and alternatives for controlling visible emissions.

2. Monitoring for Compliance

To demonstrate compliance with 40 CFR 61 Subpart M, BSF is required to keep shipment records of their asbestos-containing waste including date on the generator of the

waste, the amount of waste, the date of receipt, if any waste was improperly enclosed or covered, and any discrepancies in the amounts between the waste generated and received (**Permit Condition 20.K**.)

N. Reporting Requirements

Reporting requirements for this landfill are found in the General Conditions of the permit (Conditions 1-17) and Condition 21 of the permit.

Permit Conditions 21.A and B are reports required by subpart WWW of the NSPS. When the landfill closes, a closure report shall be submitted to the Control Officer. After this report has been submitted, no waste can be placed in the landfill until a modification is filed. Before a control equipment can be removed or the operation of that equipment can stop, the source has to submit a report to the Control Officer that will demonstrate that the equipment is no longer necessary. Landfill gases have to be controlled a minimum of 15 years, and have to be controlled until it is demonstrated that NMOC production is less than 50 Mg/yr.

Permit Condition 21.C requires the submission of a semi-annual monitoring report, including deviation reporting. The report shall be very detailed and should include information as any day, week or month that any monitoring was required but not performed, a reason for those deviations, and any action taken to ensure that the monitoring will be performed in the future. Additionally, deviations from specified operating ranges or emission limitations or standards should be included, with any additional information.

To allow the Permittee flexibility in coordinating the filing of semiannual monitoring reports with the other data gathering and reporting activities at the facility, the Permittee may select the initial reporting period to be less than 6 months. However, follow-up reporting periods must be in 6-month intervals starting from the end of the initial reporting period.

Permit Condition 21.D requires that BSF submit an annual NMOC emission rate report.

Permit Condition 21.E requires an annual report to be submitted to EPA that explains exceedances of applicable parameters monitored, if any.

Permit Condition 21.F lists additional information to be submitted with the initial performance test at this facility.

Permit Condition 21.G requires a report to be submitted to EPA if one has not already been submitted by sources that accept asbestos containing waste.

P. Testing Requirements

Permit Condition 22.A of this Permit describes the procedures for testing the engines and microturbine and submitting a report with the results. Initial testing of this equipment for the NMOC destruction efficiency is required by the NSPS.

The facility will also be emitting CO and NOx from the engines and microturbine. Exposure to this pollutant has been determined by the USEPA to adversely affect human health. The test methods to be used are 7E for NOx and 10 for CO, EPA approved test methods or alternative test methods. These methods have been shown to produce scientifically acceptable results, to be technically feasible and have shown to be reasonably accurate.

After examining the estimated cost of the test, the Department believes that the cost of a stack-sampling test of the control device performance is reasonable to determine the effectiveness of the control device, to establish a base line of emissions, to avoid potential fines, to establish parametric monitoring, to demonstrate adequacy of a maintenance program on equipment or

controls and to provide emissions rate information for possible future PSD/NSR modeling requirements.

4. DISCUSSION OF HAPS

BSF is not a major source of HAPs. Screen3 modeling was conducted for any HAP with PTE emissions over 500 lbs per year. Modeling was conducted for Hydrochloric Acid (HCl), Xylenes, Toluene, MEK, Ethylbenzene and Methylene Chloride according to MCESD "Air Toxics/Hazardous Air Pollutant Permitting Procedure" (2/29/00 Draft). HCl is emitted from the stack (flare), and the other pollutants listed above are fugitive, emitted from the landfill.The following parameters were used for modeling HCl:

Pollutant Concentration: 0.06 g/hr (4260 lb/yr flare emissions)

Stack Height:	7.01 m (23")
Exit Diameter	0.2 m (0.67")
Exit Gas Velocity:	36.9 m/sec (121 fps)
Exit Gas Temperature:	617K (650°F)

The following parameters were used for modeling the other pollutants:

Pollutant Concentration:	5.49×10^{-8} g/sec-m^2 (4540 lb/yr, used the highest emissions of Toluene from AOS#1 to be conservative)
Area:	975 m x 1219 m (3200' x 4000' estimated from site plan)

The results show that the AAAQGs were not exceeded. The Methylene Chloride limits were used for comparison for the Other HAPs since the AAAQG's are the lowest for that pollutant.

Pollutant Concentration	HCl		Other HAPs	
($\mu g/m^3$)	Predicted	AAAQG	Predicted	AAAQG
Max. 1-hr	12.52	210	4.51	3000
24-hr	5.00	56	1.80	800
Annual	1.00	No listing	0.36	220

- 1-Hr to 24-Hr Concentration: Multiply by 0.4
- 1-Hr to Annual Concentration: Multiply by 0.08

5. SOURCE SPECIFIC APPLICABLE REQUIREMENTS

A. Federal Requirements (source specific):

- 40 CFR 60 Subpart WWW (40 CFR 60 §§752 through 759) New Source Performance Standards for Municipal Landfills.
- 40 CFR 61 Subpart M (40 CFR 61 §§ 141, 153 and 154, National Emission Standards for Asbestos.

B. SIP Requirements: Rules 30, 31, 32, 33.3, 34, 310, and 331

C. Maricopa County Requirements (Source Specific)

Rule 200, Rule 210, Rule 300, Rule 310, Rule 320, Rule 321, Rule 331, Rule 335, Rule 353, Rule 360 and Rule 370

D. Installation Permit 9101488.

6. FUTURE APPLICABLE REQUIREMENTS

Regulation 40 CFR 63 Subpart AAAA, Municipal Solid Waste Landfills is applicable to this source. This MACT standard was promulgated on 4/21/03. The source has 12 months to comply and to submit an application to have this permit revised to add applicable requirements.

7. NON-APPLICABLE REQUIREMENTS

A. County Rule 311 - Particulate Matter from Process Industry: The definition of process weight excludes gases used as fuels, so this rule does not apply to the engines or microturbine.

B. 40 CFR 63 Subpart ZZZZ – Reciprocating Internal Combustion Engines: Only applicable if an engine over 500 hp is located at a major source of HAPs. BSF is not a major source of HAPs.

C. 40 CFR 63 Subpart YYYY – Stationary Combustion Turbines: Only applicable to major sources of HAPs. This is not a major source of HAPs.

D. 40 CFR 60 Subpart GG – Only applicable to turbines with more than 10 MMBtu/hr heat input.